Welcome

Congratulations on your purchase of this Sony VAIO® computer, and welcome to the online VAIO® Computer User Guide.
This user guide provides detailed information on all aspects of using your new VAIO computer, from keyboard functions to preinstalled software programs.
In the left navigation window, click the topics you want to learn more about, and that information will be displayed in this main window.

View the Electronic Flyer, which provides updates and supplemental information about your computer.

Powering Your Computer

Your VAIO® computer comes with a battery and an AC adapter. This chapter explains how to install and use these supplied accessories to power your computer. It also describes ways you can efficiently utilize the battery as a power source.

- Using AC Power
- Using the Battery
- Conserving Battery Power

Using AC Power

The supplied battery is not charged when you receive your computer. To use your computer immediately, use the supplied AC adapter as the power source. The computer charges the battery while you use AC power. See Using the Battery for more information on installing and using your battery.

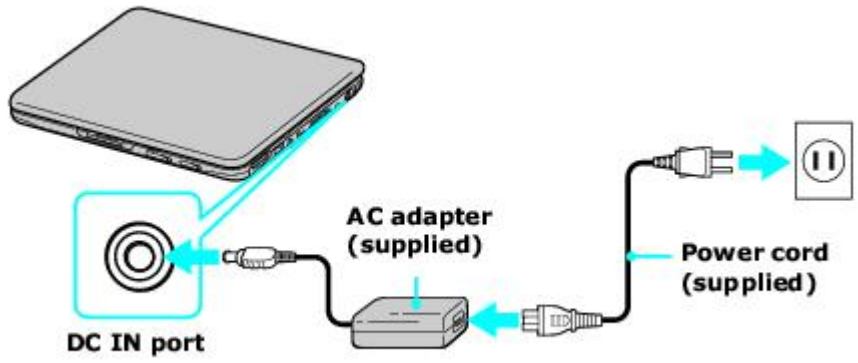
- Connecting the AC adapter
- Turning on the computer

Connecting the AC adapter

To connect the AC adapter

1. Plug the cable attached to the AC adapter into the DC IN port on your computer or docking station.

Connecting the AC Adapter to the Computer



2. Plug one end of the power cord into the AC adapter, and plug the other end into an AC outlet.

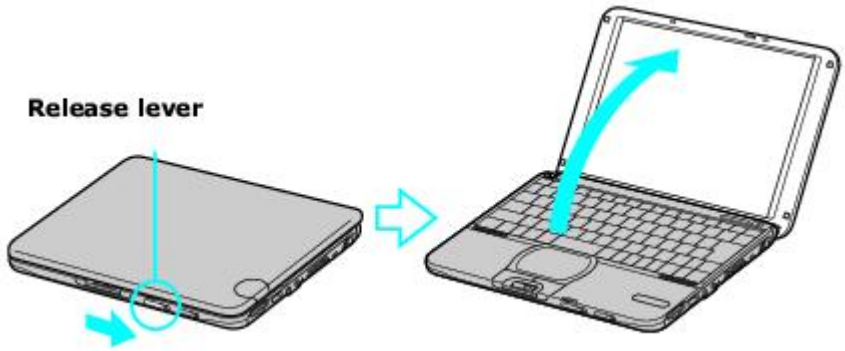
Use only the supplied AC adapter with your computer.

Turning on the computer

To turn on the computer

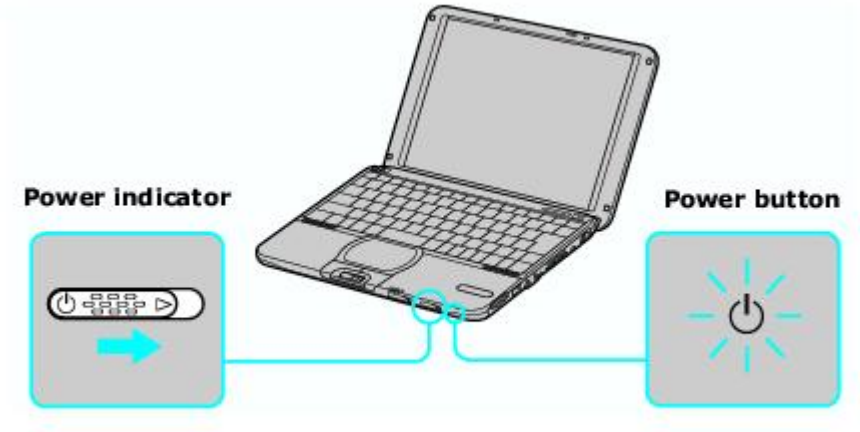
1. Slide the release lever to the right, and lift the cover while holding the bottom of the computer firmly.

Opening the Computer



2. Press the power button until the power indicator turns on.

Turning on the Computer



If you hold the power button down, the computer turns off.

3. If necessary, adjust the brightness controls for the LCD display as follows:

   - To increase light intensity, press **Fn**+**F5** and then ↑ or →.
   - To decrease light intensity, press **Fn**+**F5** and then ↓ or ←.

Using the Battery

A battery is an auxiliary power source you can use when your computer is not plugged into an AC outlet. Your computer may come equipped with one or two battery bays, depending on the model you purchased. If your computer comes with two battery bays, you can purchase a second rechargeable battery to extend your computing time. Regardless how many batteries you use, you can always extend the life of the battery by conserving power. See Conserving Battery Power for more information.

- Inserting a battery
- Removing a battery
- Displaying battery information
- Charging a battery
- Notes on batteries
- Frequently asked questions

The battery that comes with your computer is not fully charged at the time of purchase.

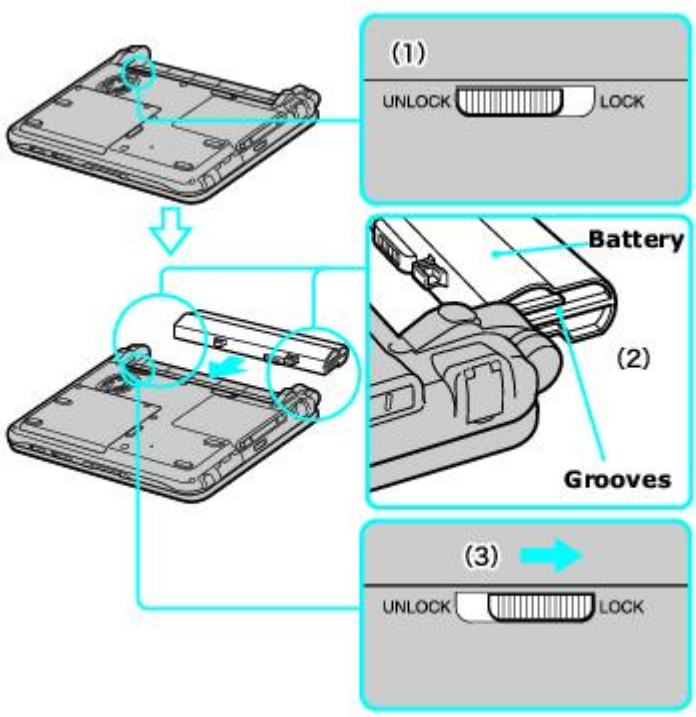
Inserting a battery

To insert a battery

1. Turn the computer over, and slide the **LOCK/UNLOCK** switch on the bottom of the computer to the **UNLOCK** position.

2. Align the grooves and tabs on the battery with those on the back of the computer.

Inserting a Battery



3. Slide the battery into the computer until it clicks into place.

4. Slide the **LOCK/UNLOCK** switch into the **LOCK** position.

If the port replicator is attached to your computer, do not insert or remove the battery. Lifting and turning the computer with the port replicator attached could cause a temporary loss of power.

Some software programs and peripheral devices prevent the system from entering Hibernate mode. If you are using a program that prevents the system from entering Hibernate mode, save your data frequently. See Using power saving modes for information on how you can manually activate a power saving mode.

Removing a battery

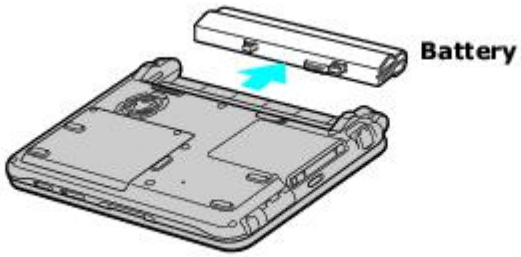
If you are not using the computer for an extended period of time, remove the battery from the computer to avoid damaging the battery. You can remove the battery when the computer is on or off.

If the computer is on, connect the AC adapter and exit a power saving mode before you remove the battery.

To remove a battery

1. Turn the computer over, and slide the **LOCK/UNLOCK** switch on the bottom of the computer to the **UNLOCK** position.
2. Slide the battery away from the computer.

Removing a Battery



Displaying battery information

You can display the remaining battery charge on the Battery Information toolbar and/or the Battery Information window.

To display the Battery Information toolbar

1. Right-click the center of the Windows® taskbar.
2. Select **Toolbars** from the shortcut menu, and click **Battery Information**. The **Battery Information** toolbar appears on the taskbar.

If the **Battery Information** toolbar is hidden behind the taskbar icons, click and drag the edge of the **Battery Information** toolbar to the left until it is in clear view.

The total charge remaining in the battery is listed in percent and real-time values. The following toolbar indicates that there is 72 percent or approximately 1 hour and 11 minutes of battery charge left.

Battery Information Toolbar

- **Percentage indicator —** Displays the percentage of the remaining capacity.
- **Time indicator —** Displays estimated time (hours : minutes) remaining before the battery fully discharges, also known as the time-to-empty.

To close the Battery Information toolbar

1. Right-click the **Battery Information** toolbar.
2. Select **Toolbars** from the shortcut menu, and click to cancel **Battery Information**. The **Battery Information** toolbar disappears from the toolbar.

To display the Battery Information window

The battery icons that appear on the **Battery Information** toolbar and the **Battery Information** window indicate the current status of the installed battery.

Battery icon	Battery status
	Charging
	Fully charged
	Discharging
	No battery

1. Double-click the **Battery** icon on the Windows taskbar. The **Battery Information** window appears.

Battery Information Window

- **Battery tab —** Displays the total charge remaining in the battery. You can click **Advanced** for specific information on the battery.
- **Alarms tab —** Displays the alarm settings, which notify you when the battery is fully charged and is too low. You can change your computer's alarm settings on this window.

✍ Click **Help** in the lower right corner of the window for more information.

Charging a battery

You will need to charge the battery if battery power drops below 10 percent or you have not used the battery for a considerable amount of time. The lithium-ion battery supplied with your computer may be recharged at any time, whether you wait until the battery is completely or partially discharged. Charging a partially discharged battery does not affect battery life. If you charge the battery and find that battery power is still low, the battery may be reaching the end of its life, and you may need to replace it.

The battery supplied with your computer is not charged at the time of purchase.

To charge a battery

You can charge the battery when the computer is on or off. However, the battery will charge faster when the computer is off. Charging the battery takes several hours. See your VAIO® Computer Specifications on the Welcome page for the approximate time needed to charge your battery.

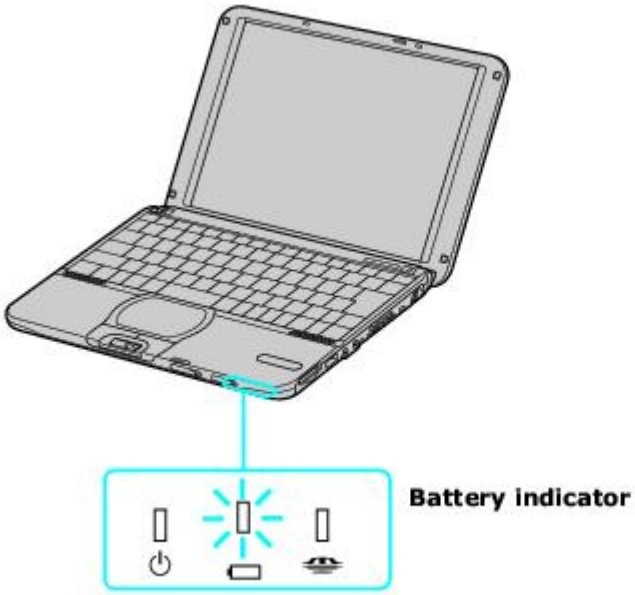
Charge the battery at temperatures between 50°F and 80°F (10°C to 30°C). Lower temperatures require more time to charge.

1. Insert the battery into the battery bay.
2. Connect the AC adapter to the computer. The computer automatically charges the battery as long as the computer is using AC power.

The battery indicator blinks while the battery charges. The battery indicator stops blinking when the battery is 100 percent full.

When using two batteries, the battery you insert first charges first. The second battery you insert begins charging when the first battery is 85 percent full.

Battery Indicator



Battery indicator status	Description
On	The computer is using battery power.
Single blink	The battery is running out of power.
Double blink	The battery is charging.
Off	The computer is using AC power.

Notes on batteries

- Never leave the battery in temperatures above 140° F (60° C), such as under direct sunlight or in a car parked in the sun.
- While the battery is in use or being discharged, the battery heats up. This is normal and is not cause for concern.
- Keep the battery away from all sources of heat.
- Keep the battery dry.
- Do not open or disassemble the battery.
- Do not expose the battery to any mechanical shock.
- Battery life is shorter in a cold environment because of decreased battery efficiency at low temperatures.

Frequently asked questions

How do I know when the battery is charged?

To determine the remaining battery charge, see Displaying battery information.

When is the computer using AC power?

When the computer is directly connected to the AC adapter, it uses AC power, even if a battery is installed.

When should I recharge the battery?

- When the battery level falls below 10 percent.
- When both the battery and power indicators blink.
- When you have not used the battery for a considerable amount of time.

Conserving Battery Power

You may use the power saving modes and PowerPanel or power schemes to conserve battery power. Conserving battery power may significantly extend your computing time, depending on how you use your computer.

- Using power saving modes
- Using PowerPanel
- Frequently asked questions

Using power saving modes

In addition to the normal operating mode, which allows you to turn off specific devices, your computer has two distinct power saving modes: Standby and Hibernate. You can use the Standby and Hibernate power saving modes to override a profile setting or initiate an immediate action.

- **Standby** — Saves the state of the system and peripheral devices in memory (RAM). Power consumption is reduced to a minimum. The system remains on, and the LCD is off.

- **Hibernate** — Saves the state of the system and peripheral devices in the Save to Disk Partition on the hard disk. Power consumption is reduced to the lowest possible setting without being completely off. Hibernate mode consumes the lowest level of power. Your computer enters Hibernate mode with the remaining battery charge drops below 5 percent, regardless of the setting you select.

✍ Some software programs and peripheral devices prevent the system from entering Hibernate mode. If you are using a program that prevents the system from entering Hibernate mode, save your data frequently to avoid data loss.

To activate Standby mode

1. Press the key combination **Fn**+**Esc** or **Fn**+**F12**. The power indicator blinks in this mode.

2. Press any key to return to Normal mode.

To activate Hibernate mode

1. Press the power button and release it immediately. Do not move the computer until the power indicator turns off.

2. Press the power button to return to normal mode.

✍ If the computer does not activate Hibernate mode, see Frequently asked questions for more information.

Using PowerPanel

The PowerPanel utility enables you to select and customize a predefined power management profile to conserve battery life. The following table describes all the predefined power management profiles in PowerPanel. Your computer is set to Automatic Profile Selection by default. You can customize the settings for all the following profiles, except the Disable Power Management profile.

Profile

Icon **Description**

Maximum Performance
Provides the best system performance but conserves little power.

Maximum Battery Life
Provides power saving features to give you maximum battery life and good performance. It slows the computer and puts it into Standby mode after a specified time period.

Ultimate Battery Life[1]
Extends the Maximum Battery Life by disabling the i.LINK port.

Power Management Off
Disables all power management settings, such as Standby and Hibernate modes. You cannot change the settings of this profile.

AC Power
Indicates when AC power is in use. Similar to the Power Management Off setting. Power Management automatically loads the AC profile unless you disable this feature.

Games
Disables the display and the Hard Disk Standby timer.

Presentation
Keeps the display on at all times while it conserves power. This option is ideal for slide show presentations. You can establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby mode to optimize power management for your system.

Camera
Optimizes performance and power requirements for camera usage.

DVD
Optimizes performance and power requirements for DVD usage.

Word Processing
Optimizes power management with longer time-outs on the hard disk and display screen. You can also establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby mode to optimize power management for your system.

Spreadsheet
Optimizes performance and power requirements for spreadsheet programs.

Communications
Extends battery life by initiating a quick display time-out. The Internal modem remains powered. You can also establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby mode to optimize power management for your system.

Automatic Profile Selection
Switches automatically to a profile suitable for active software programs.

[1] On selected models.

Do not choose the Automatic Profile Selection when connected to AC power.

To select a profile

1. Right-click the **Battery** icon on the Windows taskbar. See To display the Battery Information window for a description of the Battery icons.
2. Select **Profiles**, and click the profile on the shortcut menu. The profile settings are implemented instantly. See Using PowerPanel for descriptions of available profiles.

   When you use the battery to power your computer, your system automatically selects the Maximum Battery Life power management profile by default. If you select a different power management profile while using battery power, that profile is selected automatically the next time you use the battery to power your computer.

   See PowerPanel Help for information on customizing the power management profiles.

To customize your profile settings

You can customize your profile settings to sustain enough power for a particular computing function.

1. Right-click the **Battery** icon on the Windows® taskbar. See To display the Battery Information window for a description of the Battery icons.
2. Select **Edit/Create Profiles** from the shortcut menu.
3. In the left panel, click the profile that you want to change.
4. Right-click the setting under **System**, **LCD(Video)**, **Hard Disk**, or **Other Devices** that you want to change. See the following table for a description of each power profile.
5. Make your changes from the drop-down menu.
6. Click **File**, and click **Save**.

Power profile	Description
CPU Control[1]	Controls the processor speed. You can select either **Performance**, **Adaptive**, **Battery Life**, or **More Battery Life**. These selections are listed in order from the greatest to least amount of power consumed.
System Standby Timer	Controls the time it takes the system to activate the Standby mode when it is idle. The longer you allow the computer to sit idle while it is not in a power saving mode the more power the computer will consume.
Hibernate Timer	Controls the time it takes the system to activate the Hibernate mode when it is idle. The longer you allow the computer to sit idle while it is not in a power saving mode the more power the computer consumes. Hibernate mode conserves more power than Standby mode.
Thermal Control Strategy[1]	Controls the speed of the processor fan. You can adjust the fan speed to **Quiet**, which conserves the most power, or **Performance**.
Lid Close Action	Controls the state of your system when you close the computer's lid. You can select either **Standby** or **Hibernate** mode, or you can select **LCD Off**. Hibernate or LCD Off conserves the most power.
Hibernate on Low Battery	Controls the state of your system when the battery power is low. You can turn this setting **On** or **Off**. Selecting On conserves the most power when the battery is low.
LCD Brightness	Controls the brightness of the LCD screen. You can select a brightness level of one to nine, with one being the darkest setting. The darker you set the LCD screen the more power you conserve.
LCD Standby Timer	Controls the time it takes the system to switch the LCD to Standby mode when the system is idle. This setting only turns off power to the LCD. The system itself still functions on full power.

HDD Standby Timer Controls the time it takes the system to switch the hard disk drive to Standby mode when the system is idle. This setting only turns off power to the hard disk drive.

i.LINK Port Controls the power supply to the i.LINK port. You can disable power to the i.LINK port to conserve power.

Memory Stick Port Power-saving Controls the power supply to the Memory Stick slot. You can disable power to the Memory Stick slot to conserve power.

[1] Slows the processor speed.

Frequently asked questions

Can my computer enter Hibernate mode while using battery power?

Your computer can enter Hibernate mode while using battery power, but some software programs and peripheral devices prevent the system from entering Hibernate mode at all. If you are using a program that prevents the system from entering Hibernate mode, save your data frequently. See Using power saving modes for information on how you can manually activate Hibernate mode.

When should I replace the battery?

If, after fully charging the battery, the battery power is still low, the battery may be reaching the end of its life and should be replaced.

Why is the battery warm?

While the battery is in use or being discharged, the battery heats up. This is normal and is not cause for concern.

Internet and Network Connections

- Internet Connections
- Network Connections
- Connecting Another VAIO Computer

Internet Connections

This section describes the basic steps for setting up your dial-up or Ethernet connection to the Internet. The Internet Connection Wizard guides you through the process of connecting to the Internet and choosing an Internet service provider (ISP) or setting up an existing account. When you connect to the Internet, you can register your VAIO® computer, use online services, and gain access to Sony Computing Support.

- Setting up a dial-up Internet connection
- Setting up an Ethernet Internet connection
- Customizing your Internet connection
- Frequently asked questions

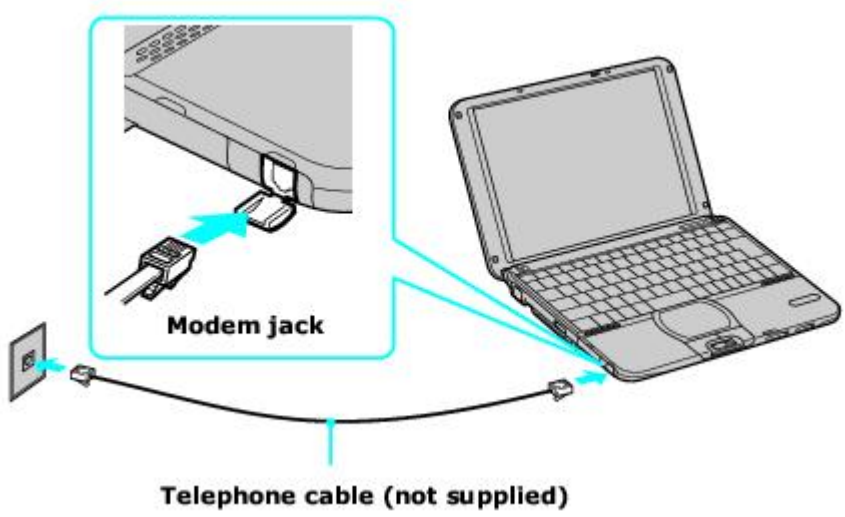
Setting up a dial-up Internet connection

Before you can connect to the Internet, you need to connect your computer to a telephone line via a telephone cable (not supplied). Once you have set up your telephone cable, you're ready to connect to the Internet.

To connect a telephone cable

1. Locate the Modem jack on your computer. For location information, see Locating Ports and Controls in the Setting Up chapter of your printed VAIO® Computer Quick Start.
2. Plug one end of the telephone cable into the Modem jack. Make sure it clicks into place.
3. Plug the other end into the wall jack.

Connecting a Telephone Cable



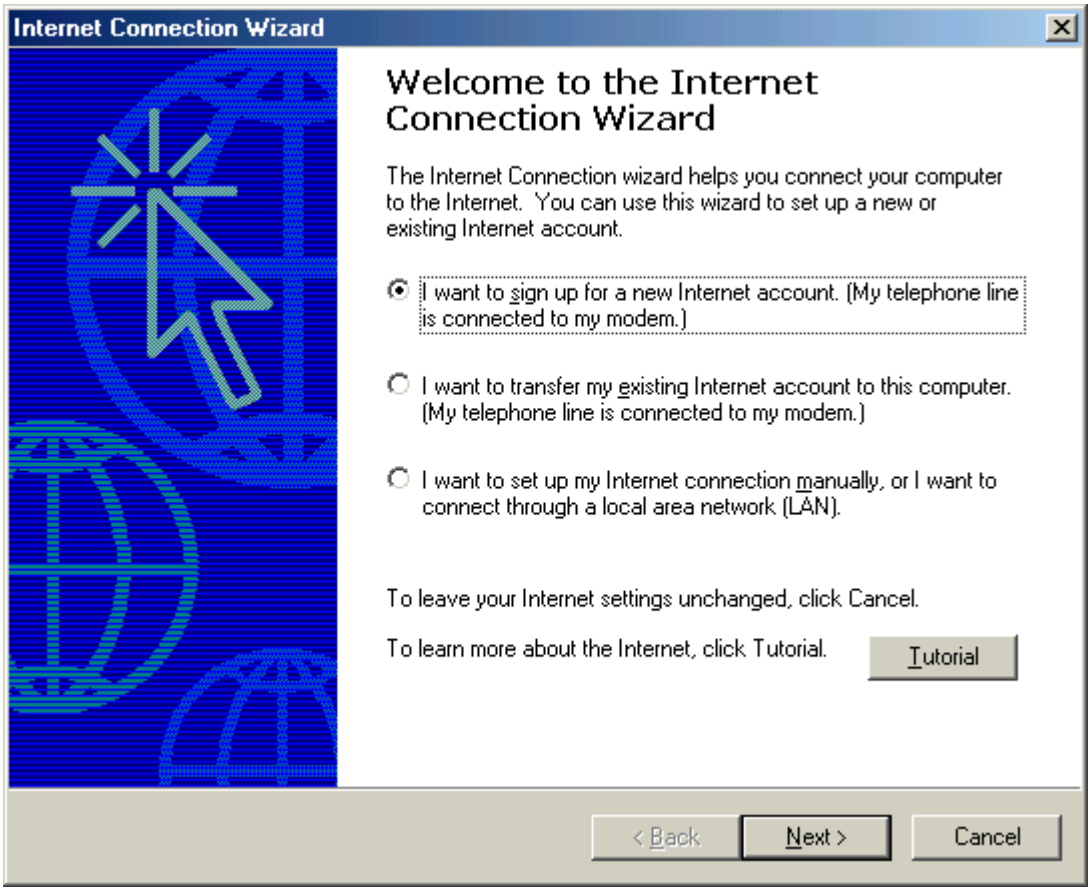
Your computer does not work with party lines, cannot be connected to a coin-operated telephone, and may not work with multiple telephone lines or a private branch exchange (PBX). Some of these connections may result in excess electrical current and could cause a malfunction in the internal modem.

If you connect a telephone cable coming through a splitter, the modem or connected device may not work properly.

To set up a dial-up connection to the Internet

1. Connect your computer to a telephone line. See To connect a telephone cable for more information.
2. Click **Start**, point to **Programs**, **Accessories**, **Communications**, and click **Internet Connection Wizard**. The **Internet Connection Wizard** appears.

Internet Connection Wizard


Internet Connection Wizard
Welcome to the Internet Connection Wizard
The Internet Connection wizard helps you connect your computer to the Internet. You can use this wizard to set up a new or existing Internet account.
I want to sign up for a new Internet account. (My telephone line is connected to my modem.)
I want to transfer my existing Internet account to this computer. (My telephone line is connected to my modem.)
I want to set up my Internet connection manually, or I want to connect through a local area network (LAN).
To leave your Internet settings unchanged, click Cancel.
To learn more about the Internet, click Tutorial.
Tutorial
< Back
Next >
Cancel

3. Follow the on-screen instructions.

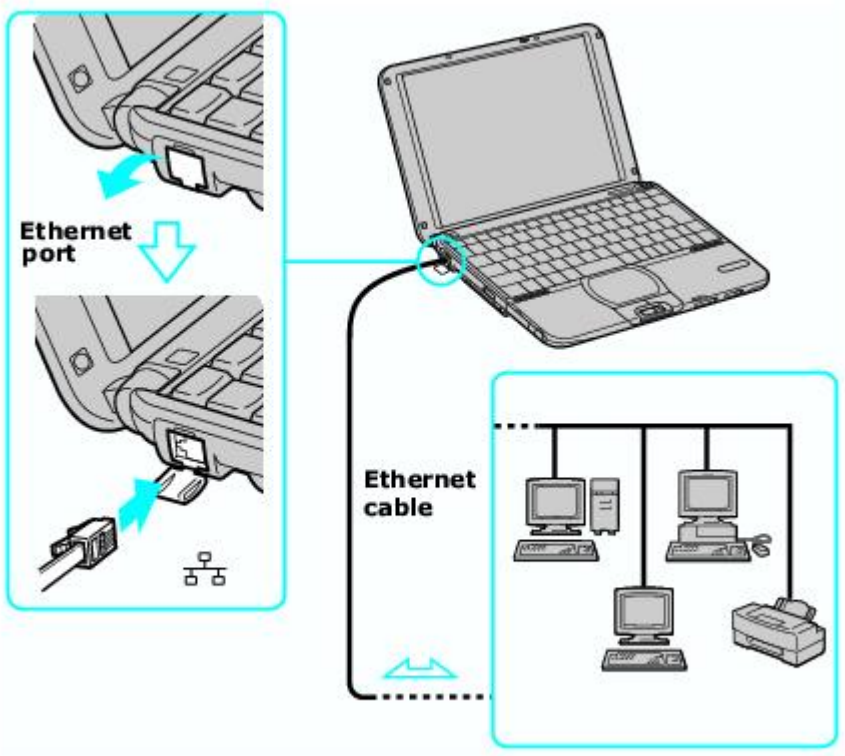
Setting up an Ethernet Internet connection

Your computer accommodates both 10BASE-T and 100BASE-TX Ethernet connections, with data transfer speeds of between 10 and 100 Mbps, depending on the line conditions and Ethernet cable.

To connect an Ethernet cable

1. Locate the Ethernet port on your computer. For location information, see Locating Ports and Controls in the Setting Up chapter of your printed VAIO® Computer Quick Start.

Connecting an Ethernet Cable



2. Plug one end of the Ethernet cable into your computer's Ethernet port and the other into the network connection.

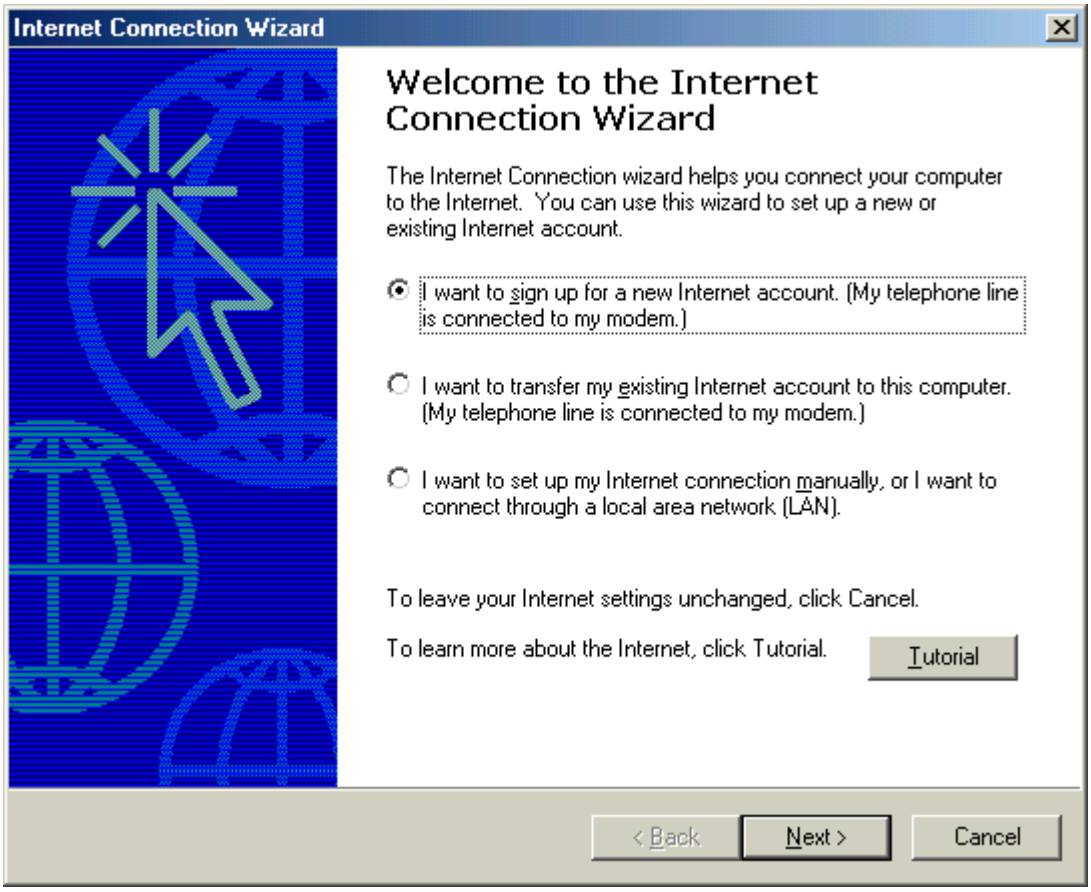
Your computer does not work with party lines, cannot be connected to a coin-operated telephone, and may not work with multiple phone lines or a private branch exchange (PBX). Some of these connections may result in excess electrical current and could cause a malfunction in the internal modem.

If you connect a telephone cable via a splitter, the modem or connected device may not work properly.

To set up an Ethernet connection to the Internet

1. Connect your computer to a network connection. See To connect an Ethernet cable for more information.
2. Click **Start**, point to **Settings**, **Control Panel**, and click **Internet Options**. The **Internet Properties** dialog box appears.
3. Click to open the **Connections** tab, and click **LAN Settings** near the bottom of the page. The **Local Area Network (LAN) Settings** dialog box appears.

Internet Connection Wizard


Internet Connection Wizard
Welcome to the Internet Connection Wizard
The Internet Connection wizard helps you connect your computer to the Internet. You can use this wizard to set up a new or existing Internet account.
I want to sign up for a new Internet account. (My telephone line is connected to my modem.)
I want to transfer my existing Internet account to this computer. (My telephone line is connected to my modem.)
I want to set up my Internet connection manually, or I want to connect through a local area network (LAN).
To leave your Internet settings unchanged, click Cancel.
To learn more about the Internet, click Tutorial.
Tutorial
< Back
Next >
Cancel

4. Click to select the **Automatically detect settings** check box.
5. Click to select the **Use automatic configuration script**, and type an address in the **Address** box.
6. Click **OK**.

Customizing your Internet connection

The Internet Properties dialog box enables you to change the way you view the Internet. You can change your home page, fonts, language, and colors. You can also regulate content and set your browsing preferences.

To open the Internet Properties dialog box

1. Click **Start**, point to **Settings**, **Control Panel**, and click **Internet Options**. The **Internet Properties** dialog box appears.
2. Click the tabs to view customizing options.
3. Make changes, and click **Apply** to activate your changes.
4. Click **OK**.

Frequently asked questions

Why doesn't my modem work?

- Make sure the telephone cable is securely plugged into the Modem jack and the wall jack. See To connect a telephone cable for more information.
- Make sure the telephone cable is working by plugging the cable into an ordinary telephone and listening for a dial tone.
- Make sure the telephone number the program is dialing is correct.
- Make sure the software you are using is compatible with the computer's modem. (All preinstalled Sony programs are compatible.)
- If you are still experiencing problems, use the supplied Application Recovery CD(s) to reinstall the modem driver software. See Using the Application Recovery CD(s) for more information.

Why is my modem connection slow?

Your computer is equipped with a V.90 compatible modem. Many factors may influence modem connection speed, including telephone line noise or compatibility with telephone equipment, such as fax machines or other modems. If you think your modem is not connecting properly to other PC-based modems, fax machines, or your Internet Service Provider (ISP), follow these steps:

- Ask your telephone company to verify your telephone line is free of any line noise.
- If your problem is fax-related, make sure there are no problems with the fax machine you are calling and that it is compatible with fax modems.
- If you are having a problem connecting with your ISP, make sure the ISP is not experiencing technical problems.
- If you have a second telephone cable available, try connecting the modem to that cable.

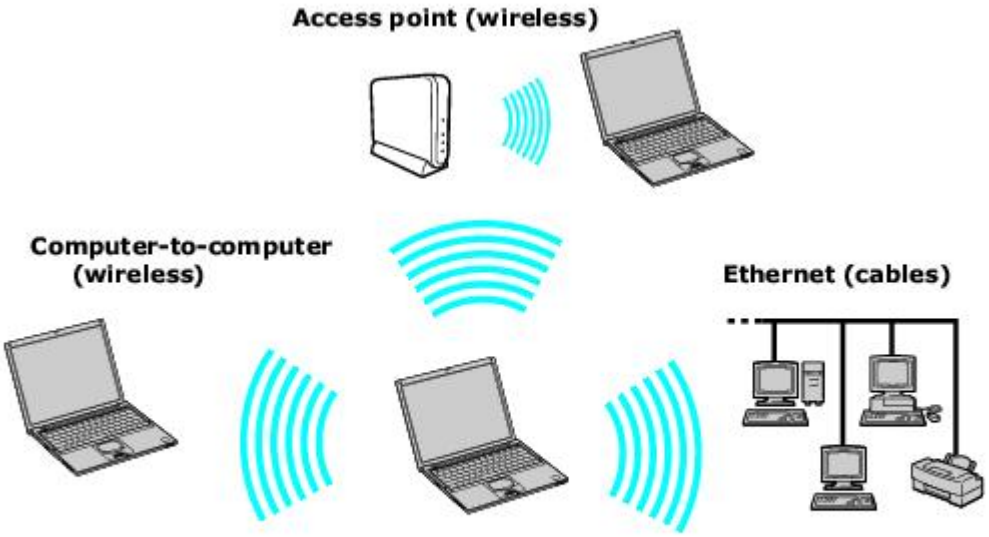
Network Connections

With a Sony computer, you can easily set up or connect to a variety of networks. The Network Connection Wizard makes it easy to gain access to remote and local area networks (LANs) using wireless, Ethernet, or dial-up connections.

For more information about networking, click **Start**, **Help**, and then **Networking**.

- Using Ethernet and dial-up connections
- Using wireless LAN connections
- Checking your network connection status
- Frequently asked questions

Types of Networks



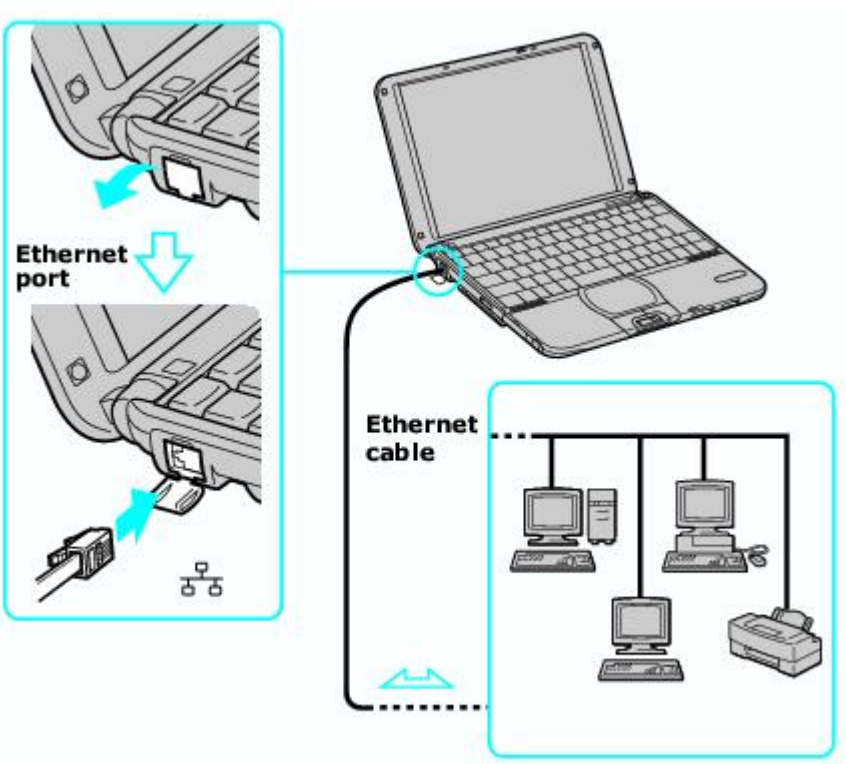
Using Ethernet and dial-up connections

Local area networks (LANs) comprise a group of computers and associated devices within a small geographic area, such as a home or office building. For setting up LANs, Ethernet is a widely installed technology. Your computer accommodates both 10BASE-T and 100BASE-TX Ethernet connections, with data transfer speeds of between 10 and 100 Mbps, depending on the Ethernet cable.

To set up an Ethernet LAN

1. Plug one end of the Ethernet cable into your computer's Ethernet port and the other into the network connection.

Connecting an Ethernet Cable



2. Click **Start**, point to **Settings**, **Control Panel**, and click **Internet Options**. The **Internet Properties** dialog box appears.
3. Click to open the **Connections** tab, and click **LAN Settings** near the bottom of the page. The **Local Area Network (LAN) Settings** dialog box appears.
4. Click to select the **Automatically detect settings** check box.
5. Click to select the **Use automatic configuration script**, and type an address in the **Address** box.
6. Click **OK**.

Warning: Only connect 10BASE-T and 100BASE-TX cables to the Ethernet port . Do not connect any other type of network cable or any telephone cable. Connecting cables other than those listed above may result in an electric current overload and could cause a malfunction, excessive heat, or fire in the port. To connect the unit to the network, contact your network administrator.

You can connect to your company network from a remote location and use data, applications, and network resources. See Microsoft® Windows® Help by clicking **Help** from the **Start** menu, and then clicking **Networking** in the left panel.

Using wireless LAN connections

A wireless local area network (LAN) is a network in which you can connect to a LAN through a wireless (radio) connection. You can opt to purchase a Sony Wireless LAN Access Point to set up a LAN.

The Wireless LAN Access Point is designed for building a wireless LAN environment. Because a wireless LAN configuration requires no wiring, you can operate multiple computers more freely than ever before.

You can also purchase an external Wireless LAN PC Card separately, but your computer (depending on the model you purchased) may already come with a built-in mini PCI card that allows for wireless connections. For information about your computer's wireless capabilities, see the Welcome page to view your VAIO® Computer Specifications. The Wireless LAN PC Card is designed for a wireless LAN environment. You can use the Wireless LAN PC Card with or without the access point.

For more information on Sony Wireless LAN, go to http://www.sonystyle.com/vaio.

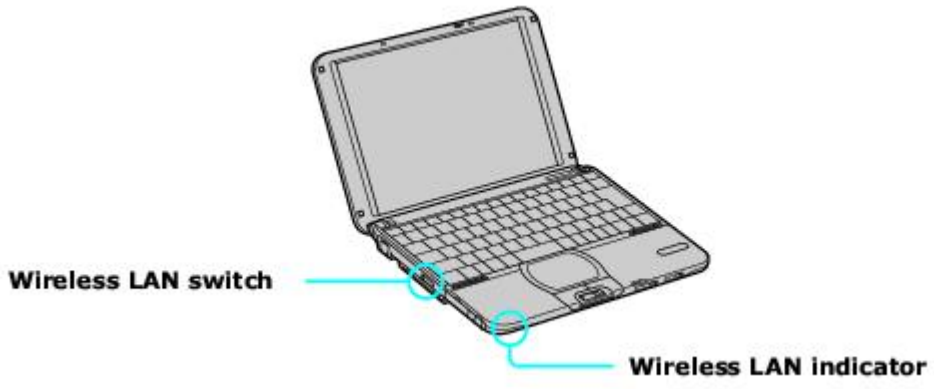
There are two types of wireless connections:

- An infrastructure network is one that extends an existing wired local network to wireless devices by providing an access point. The access point bridges the wireless and wired LAN and acts as a central controller for the Wireless LAN. The access point coordinates transmission and reception from multiple wireless devices within a specific range.
- A peer-to-peer group (ad-hoc) network is one in which a local network is created only by the wireless devices themselves, with no other central controller or access point. Each device communicates directly with other devices in the network. You can set up an ad-hoc network easily at home.

To connect to an existing wireless network

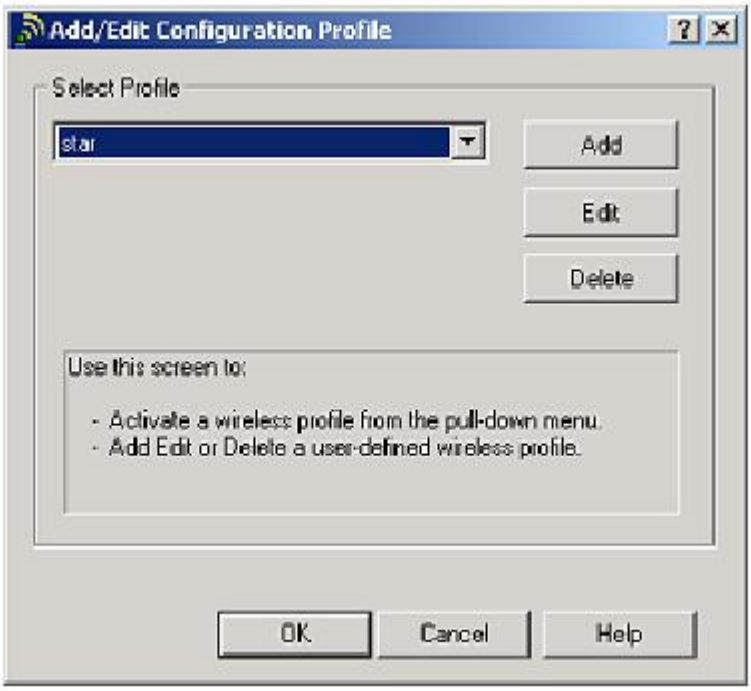
1. Move the Wireless LAN switch to **ON** or insert a Wireless LAN PC Card into the PC Card slot. See Inserting PC Cards for more information.
   The Wireless LAN indicator turns on.

Connecting to a Wireless LAN



2. Click **Start**, point to **Settings**, **Control Panel**, and click **Wireless Network**. The **Add/Edit Configuration Profile** window appears.

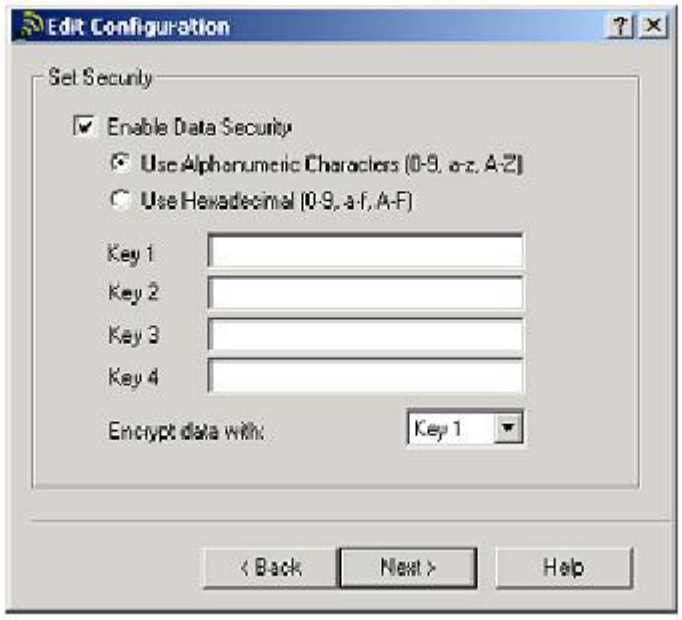
Add/Edit Configuration Profile Window



3. Click **Add**. The **Edit Configuration** dialog box appears.
4. Type a profile name, and select **Access Point** from the **Network Type** drop-down list if it is not already selected.
5. Click **Next**.
6. Type a name in the **Network Name** box or click **Scan** to select a network.
7. Click **Next**.
8. If the network was set up with an encryption key:
    1. Click to select the **Enable Data Security** check box.
    2. Select either **Use Alphanumeric Characters** or **Use Hexadecimal**, depending on the encryption key.
    3. Type the five-character encryption key in the **Key 1** box, and make sure **Key 1** appears in the **Encrypt data with** box. Ask the network administrator for the encryption key if you don't already have it.
    4. Click **Next**.

    If the network was not set up with an encryption key, then click **Next**.

Add/Edit Configuration Profile Window



9. Select a power management option, and click **Next**.

10. Click to select the **Renew IP Address when selecting this profile** check box, so you don't have to type the IP Address everytime you want to connect to the network.

11. Click **Finish**.

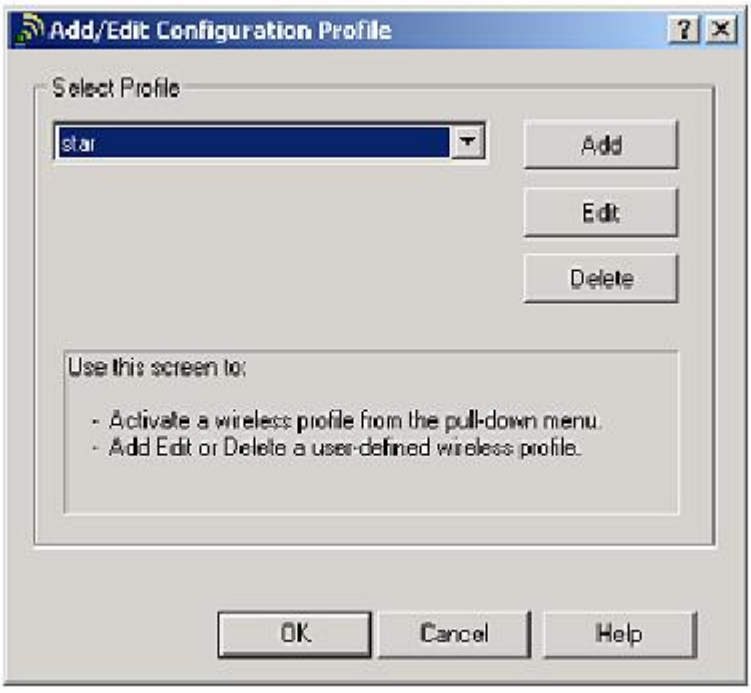
To set up a wireless network

1. Move the Wireless LAN switch to **ON** or insert a Wireless LAN PC Card into the PC Card slot. See Inserting PC Cards for more information.
   The Wireless LAN indicator turns on.

Connecting to a Wireless LAN

2. Click **Start**, point to **Settings**, **Control Panel**, and click **Wireless Network**. The **Add/Edit Configuration Profile** window appears.

Add/Edit Configuration Profile Window



3. Click **Add**. The **Edit Configuration** dialog box appears.

4. Type a profile name, and select **Access Point** from the **Network Type** drop-down list if it is not already selected.

5. Click **Next**.

6. Type a name in the **Network Name** box.

7. Click **Next**.

8. Set up an encryption key, so only the individuals to whom you give the encryption key can gain access to the network:

   1. Click to select the **Enable Data Security** check box.

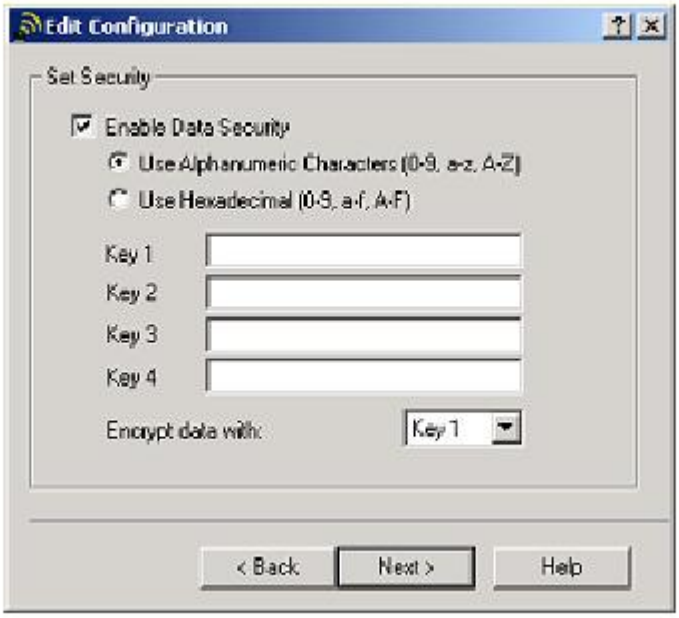
   2. Select either **Use Alphanumeric Characters** or **Use Hexadecimal**.

3. Type a five-character encryption key in the **Key 1** box using either alphanumeric or hexadecimal characters, depending on your selection in the previous step.

4. Make sure **Key 1** appears in the **Encrypt data with** box.

5. Click **Next**.

Add/Edit Configuration Profile Window



9. Select a power management option, and click **Next**.

10. Click to select the **Renew IP Address when selecting this profile** check box, so you don't have to type the IP Address everytime you want to connect to the network.

11. Click **Finish**.

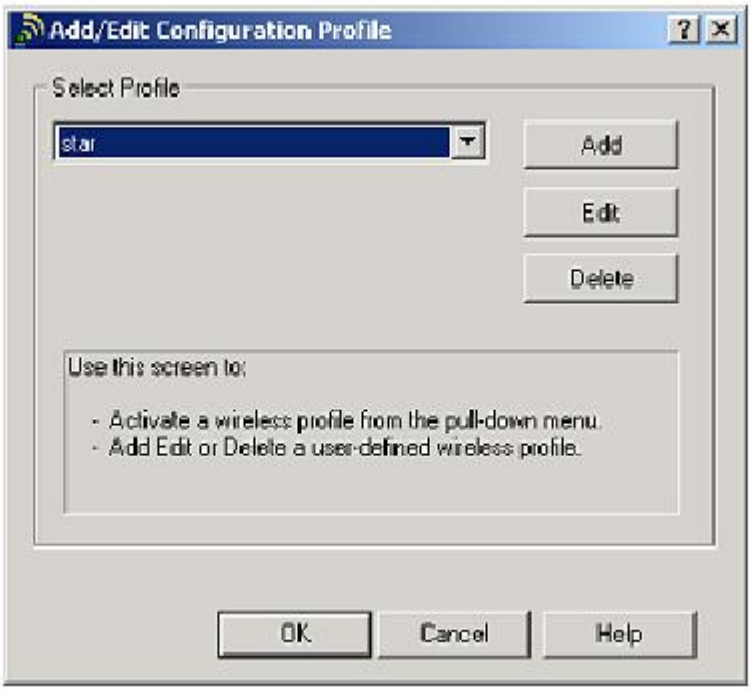
To set up a peer-to-peer group (ad-hoc) network

1. Move the Wireless LAN switch to **ON** or insert a Wireless LAN PC Card into the PC Card slot. See Inserting PC Cards for more information.
The Wireless LAN indicator turns on.

Connecting to a Wireless LAN

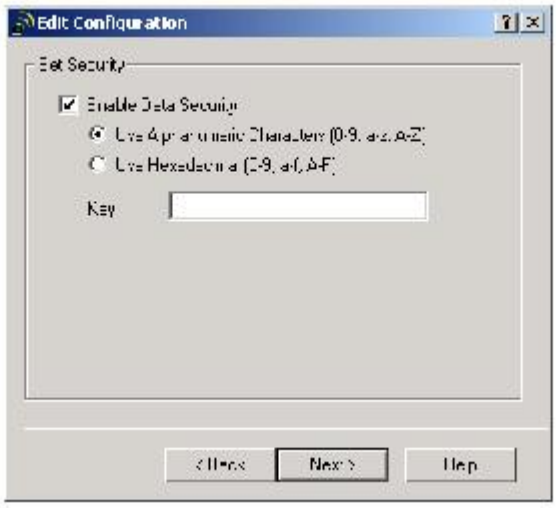
2. Click **Start**, point to **Settings**, **Control Panel**, and click **Wireless Network**. The **Add/Edit Configuration Profile** window appears.

Add/Edit Configuration Profile Window



3. Click **Add**. The **Edit Configuration** dialog box appears.
4. Type a profile name, and select **Peer-to-Peer Group** from the **Network Type** drop-down list.
5. Click **Next**.
6. Type a name in the **Network Name** box, and select a channel using the **Channel Number** drop-down list.
7. Click **Next**.
8. Set up an encryption key, so only the individuals to whom you give the encryption key can gain access to the network:
    1. Click to select the **Enable Data Security** check box.
    2. Select either **Use Alphanumeric Characters** or **Use Hexadecimal**.
    3. Type a five-character encryption key in the **Key** box using either alphanumeric or hexadecimal characters, depending on your selection in the previous step.
    4. Click **Next**.

Add/Edit Configuration Profile Window



9. Select a power management option, and click **Next**.
10. Click to select the **Renew IP Address when selecting this profile** check box, so you don't have to type the IP Address everytime you want to connect to the network.
11. Click **Finish**.

To disconnect from a wireless network

- For computers with built-in wireless LAN functionality:
  1. Click **Start**, point to **Settings**, and click **Network and Dial-up Connections**.
  2. Right-click the appropriate **Local Area Connection** network icon, and select **Disable**.
  3. Move the Wireless LAN switch to **OFF**. The Wireless LAN indicator turns off.
- For wireless LAN PC Card connections:
  1. Click **Start**, point to **Settings**, and click **Network and Dial-up Connections**.
  2. Right-click the appropriate **Local Area Connection** network icon, and select **Disable**.
  3. Correctly remove the PC Card. See Inserting PC Cards for more information.

Turning off the wireless LAN functionality while accessing remote documents, files, or resources may result in data loss.

Checking your network connection status

To check the status of your network connection

- Click **Start** on the Windows® taskbar, and point to **Programs**, **ORiNOCO**, and click **Client Manager**. The **Status** box shows information about your network connection.

Frequently asked questions

Why can't my computer connect to a Wireless LAN Access Point?

- Connection availability is affected by distance and obstructions. You may need to move your computer away from obstructions or closer to any access point you may be using.
- Make sure the Wireless LAN switch on the computer is in the **ON** position or the Wireless LAN PC Card is properly inserted. See Inserting PC Cards for more information.
- Make sure power to the access point is on.
- Make sure the encryption key is correct.

Why can't I gain access to the Internet?

- If you are using a Wireless LAN PC Card, make sure it is properly inserted into the PC Card slot. For more information, see Inserting PC Cards.
- Check the access point settings. Refer to the instructions supplied with the access point.
- Make sure your computer and the access point are connected to one another.
- Move your computer away from obstructions or closer to any access point you may be using.
- Make sure your computer is properly configured for Internet access.

Why is the data transfer speed slow?

- The Wireless LAN data transfer speed is affected by distance and obstructions between devices and access points. Other factors include device configurations, radio conditions, and software compatibility. To maximize the data transfer speed, move your computer away from obstructions or closer to any access point you may be using.
- If you are using a Wireless LAN Access Point, the device may be temporarily overloaded depending on the number of other devices communicating via the access point.
- If your access point interferes with other access points, change the access point channel. See your access point instructions for more information.

Why is the communication speed interrupted or slowed down when MPEG2 data is transferred?

The typical effective data transfer speed via an access point is 4-5 Mbps when adhering to the IEEE 802.11b standard. High-rate stream transfers with MPEG2 data may lower this rate.

How do I avoid data transfer interruptions?

- Data transfer interruptions may occur with large files or use of microwaves and cordless telephones when connected to an access point.
- Move the computer closer to the access point.
- Make sure the access point connection is intact.
- Change the access point channel. See your access point instructions for more information.

Can I connect to a IEEE 802.11a device?

Computers with built-in Wireless LAN support the IEEE 802.11b standard only. Devices connecting to a Wireless LAN using the IEEE 802.11a standard cannot connect to devices using the IEEE 802.11b standard.

What are channels?

Wireless LAN communication occurs on divided frequency bands known as channels. Third-party Wireless LAN Access Point channels may be preset to different channels from Sony devices.

If you are using a Wireless LAN Access Point, refer to connectivity information contained in your access point instructions.

Connecting Another VAIO Computer

You can use a compatible i.LINK[1] cable (not supplied) to connect two compatible mobile VAIO computers, and then use one computer to edit, copy, or delete files on the other computer. You can also print from a printer that is attached to either computer.

Only i.LINK cables may be used to connect two compatible mobile VAIO computers.

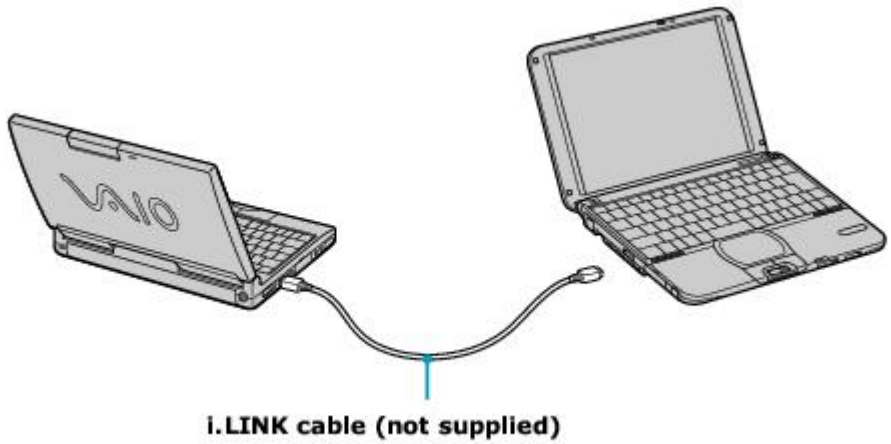
- Frequently asked questions

To connect VAIO computers

1. Plug one end of the i.LINK cable into the i.LINK port on each computer.
2. Restart both computers and log on when prompted.
3. Click**Start**, point to **Programs**, **Smart Connect**, and click **Smart Connect Monitor**. The **Smart Connect Monitor** window appears.
4. Click **Option**, and select **Run Smart Connect Switch**.
5. Click to select **Enable Smart Connect**.
6. Click to select **STD mode**, if it is not already selected.
7. Click **OK**. Your computers are connected.
8. To view the folders on your network:
   - In the **Smart Connect Monitor** window, right-click a computer name, and select **Open with Explorer**.
   - Double-click **My Network Places**, and click **Computers Near Me** in the **My Metwork Places** window.

For more information, see Smart Connect Online Help.

Connecting Another Computer



To disconnect VAIO computers when the computers are on

1. Close all open files that are shared with the connected computers.
2. Unplug the i.LINK cable from the i.LINK port on each computer.

To disconnect VAIO computer when the computers are off

- Unplug the i.LINK cable from the i.LINK port on each computer.

[1] i.LINK is a trademark of Sony used to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software programs, operating system, and compatible i.LINK devices. All products with an i.LINK connector may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Frequently asked questions

Why can't I establish a connection between two VAIO computers?

- Your computer may not recognize an i.LINK[1] connection if the i.LINK cable is not plugged securely into the i.LINK ports. Disconnect the i.LINK cable and securely reconnect it to both computers. If neither computer responds after a few moments, restart both computers.

- If the computers do not recognize the i.LINK connection after resuming from a power saving mode (Standby or Hibernate), restart both computers.

[1] i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

CDs, DVDs, and Optical Drives

- Connecting External Optical (Disc) Drives
- Inserting and Ejecting CDs or DVDs
- Copying and Playing CDs
- Playing DVDs

Connecting External Optical (Disc) Drives

Depending on the model you purchased, your computer may come equipped with a built-in optical drive. If not, you can purchase an external optical drive, such as PC Card or i.LINK[1] drive, and connect it to your computer, so you can write to and read CDs and DVDs. If you wish to purchase an external optical drive, shop Sony online at http://www.sonystyle.com/vaio or contact your local retailer.

The Sony i.LINK optical drive is only compatible with certain Sony VAIO® PCG series computers that are preinstalled with Microsoft® Windows® XP Home Edition or Professional software.

- i.LINK optical (disc) drives
- PC Card optical (disc) drives
- Frequently asked questions

[1] i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

i.LINK optical (disc) drives

The i.LINK drive enables you to read data stored on a DVD or CD. Your computer may come with an external i.LINK drive, depending on the model you purchased. Once the i.LINK drive is connected, you can use the preinstalled software to create CDs or play DVDs.

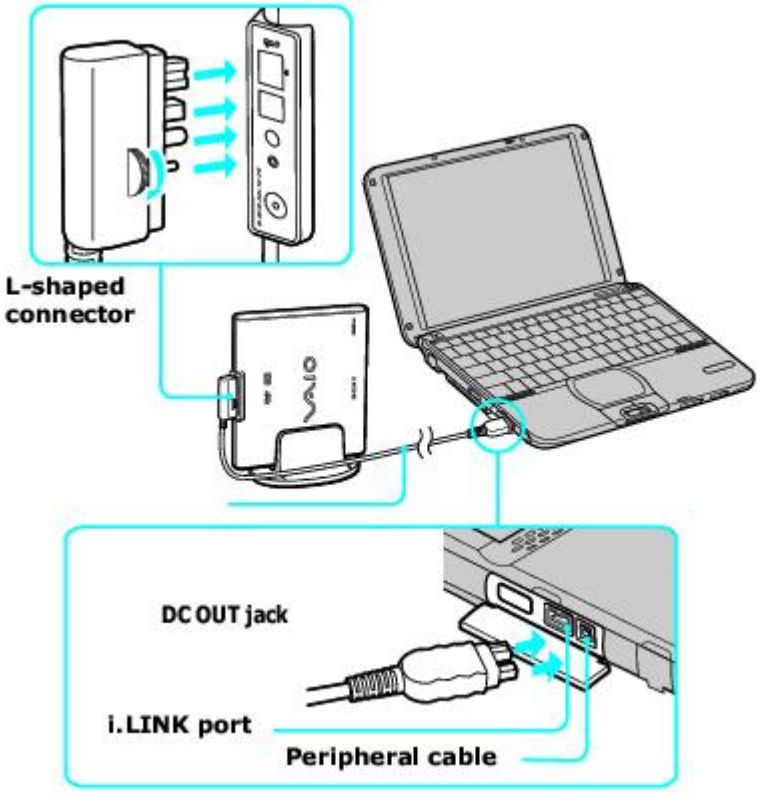
The i.LINK optical drive draws power from the computer through a peripheral cable. You must connect the peripheral cable to both the i.LINK port and DC OUT jack on your computer.[1]

Do not use the i.LINK optical drive and the PC Card drive at the same time. Connecting both devices may cause the computer to malfunction.

To connect an i.LINK optical drive

1. Close any active programs to prevent data loss.
2. Turn on power to the computer.
3. Insert the L-shaped connector on the peripheral cable (supplied with the i.LINK optical drive) into the matching port on the rear panel of the i.LINK optical drive.

Connecting the i.LINK Optical Drive



4. Turn the LOCK device clockwise to secure the L-shaped connector.
5. Insert the two-prong peripheral cable connector into both the i.LINK port and DC OUT jack on the computer. The i.LINK drive power indicator turns on, and the computer automatically detects the connected drive.
6. Restart your computer.

To use the i.LINK optical drive

1. Double-click the **My Computer** icon on the desktop. The **My Computer** window appears.
2. Double-click **DVD/CD-RW Drive**. The **DVD/CD-RW Drive** window appears.

To disconnect the i.LINK optical drive

1. Close any active programs to prevent data loss.

2. Double-click the **Unplug or Eject Hardware** icon on the taskbar. The **Unplug or Eject Hardware** window appears.

3. Select the **i.LINK drive in the Hardware devices window, if it is not already selected**.

4. Click **Stop**. The **Stop a Hardware device** window appears.

5. Make sure the **i.LINK drive** is selected, and click **OK**. A message appears stating it is now safe to remove the hardware device.

6. Unplug the i.LINK optical drive from the i.LINK port and DC OUT jack on the computer, port replicator, or docking station.

If you connect and use an i.LINK optical drive when your computer is running on battery power, the battery life will be reduced.

PC Card optical (disc) drives

The PC Card drive enables you to read data stored on a DVD or CD. Your computer may come with an external PC Card drive, depending on the model you purchased. Once the PC Card drive is connected, you can use the preinstalled software to create CDs or play DVDs.

Do not use the i.LINK optical drive and the PC Card drive at the same time. Connecting both devices to may cause the computer to malfunction.

If you connect a non-Sony DVD drive to your VAIO® computer, DVD playback may not function properly. The supplied DVD software must be installed to play a DVD. For best performance, use a Sony compatible DVD drive.

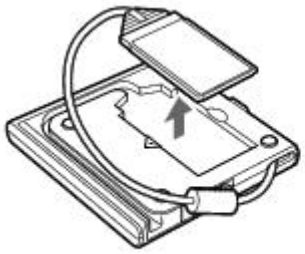
To connect an optical drive

You can connect a PC Card drive while the computer is on. Connecting the drive when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

Instructions on connecting an optical drive may vary, depending on the specific drive you purchased.

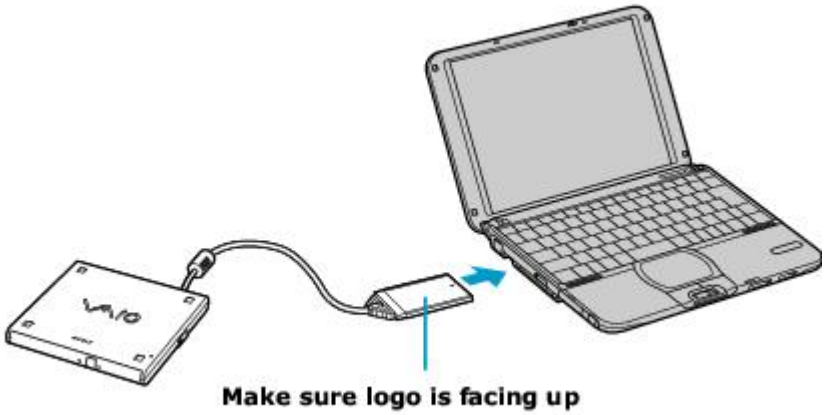
1. Remove the PC Card from the bottom of the optical drive.

Removing a PC Card



2. Insert the PC Card into the PC Card slot with the logo facing up. See Inserting PC Cards for more information.

Inserting a PC Card



Remove the protective cover that is attached to the lens of the optical drive before you use the drive. See Inserting and Ejecting CDs or DVDs for information on how to open the optical drive to access the lens.

See the manual that accompanied your optical drive for more information on its installation and use.

To disconnect the PC Card drive

1. Close any active programs to help prevent data loss.

2. Double-click the **Unplug or Eject Hardware** icon on the taskbar. The **Unplug or Eject Hardware** window appears.

3. Select the **PC Card drive on the Hardware devices window, if it is not already selected**, and click **Stop**. The **Stop a Hardware device** window appears.

4. Select the **PC Card drive**, and click **OK**. A message appears stating it is now safe to remove the hardware device.

5. Disconnect the PC Card drive from the computer.

Frequently asked questions

Why isn't my i.LINK drive playing a CD or DVD properly?

- The i.LINK optical drive will not play a CD or DVD if the disc was inserted with the label facing down. Eject the CD or DVD from the drive, and make sure the label is facing up.
- The disc requires a particular software program that is not already installed on your computer. Install that program according to the manufacturer's instructions.
- The DVD is not compatible with the optical drive and a region code warning appears when you try to play it. Make sure the region code listed on the DVD package is compatible with the drive.

Why won't my i.LINK drive play my computer programs?

If multiple i.LINK®[1] devices are connected to the computer, the software supplied with your computer will not recognize them. Turn off your computer and all connected devices. Disconnect the devices that are not in use. See i.LINK optical (disc) drives for instructions on reconnecting the i.LINK device.

[1] i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

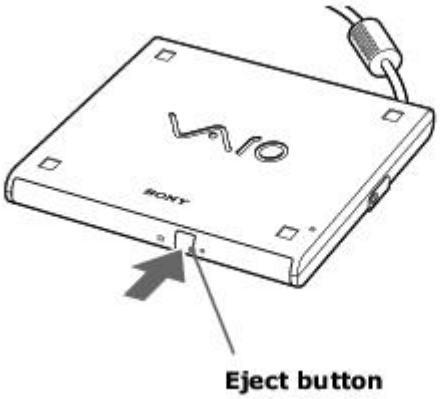
Inserting and Ejecting CDs or DVDs

Avoid using adhesive labels to identify your CDs or DVDs. Adhesive labels may damage the optical drive if they come off while the disc is in the drive.

To insert a CD or DVD

1. Turn on the computer, and exit a power saving mode (Standby or Hibernate) if one is active. For more information on power saving modes, see Using power saving modes.
2. Press the Eject button on the optical drive cover to open the drive tray. The drive tray slides out.

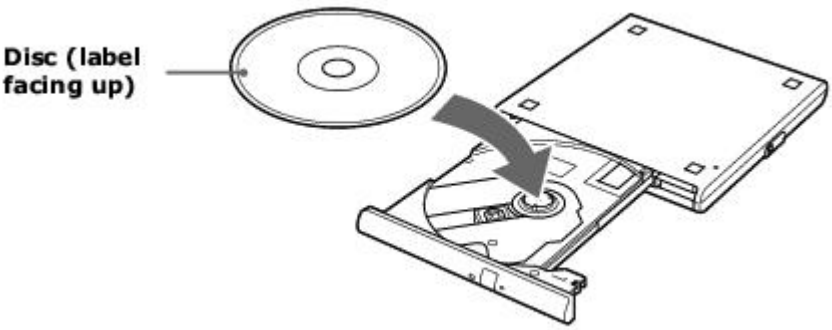
Ejecting the Drive Tray



3. Place a disc on the drive tray with the label facing up.

You can play some DVDs on both sides. Insert this type of DVD with the side you want to play facing up.

Inserting a Disc



4. Press the disc onto the hub until the disc clicks securely into place.

If you do not seat the disc firmly over the hub, the disc may come loose while it is in the drive. A loose disc may damage the optical drive and make opening the drive tray difficult.

5. Push the drive tray gently to close it. The Busy indicator on the drive blinks while your computer is reading data from the drive.

To ejecting a CD or DVD

1. Turn on the computer, and exit a power saving mode (Standby or Hibernate) if one is active. For more information on power saving modes, see Using power saving modes.
2. Close all software programs that are open from the optical drive, and wait for the LED indicator to turn off.
3. Press the Eject button on the optical drive cover to open the drive tray. The drive tray slides out.

If the Eject button does not work, turn off the computer and insert a thin, straight object (such as a paper clip) into the manual eject hole next to the Eject button.

4. Lift the disc from the drive.

5. Push the drive tray gently to close it.

Copying and Playing CDs

Your optical drive can read CDs and DVDs. The type of optical drive installed in or connected to your computer may vary, depending on the model you purchased. If you are using a CD-RW/DVD Combo Drive, you can write data to CD-Rs and CD-RWs.

- Playing CDs
- Copying files to a CD-RW or CD-R

Do not remove the optical drive when the computer is in a power saving mode (Standby or Hibernate). Doing so may cause the computer to malfunction.

Playing CDs

Before you play an audio CD, you may need to enable your computer's audio feature.

To enable the audio feature

1. Click **Start**, and point to **Settings** and **Control Panel**, then click **System**. The **System Properties** window appears.
2. Select the **Hardware** tab, and click **Device Manager** in the **Device Manager** box. A window with a listing of the computer's hardware devices appears.
3. Double-click **DVD/CD-ROM drives**.
4. Double-click the listed drive name, and select the **Properties** tab.
5. Click to select the **Enable digital CD audio for this CD-ROM device** check box if it is not already selected.
6. Click **OK**.

To adjust the volume for playing CDs and DVDs

Some software programs have built-in volume controls, which you can adjust. If there are no volume controls, then you can adjust the volume of your computer's built-in speakers by doing one of the following:

- Using the Function keys. An on-screen display may appear, notifying you when a change occurs.
  - To increase volume, press **Fn**+**F4**, then ↑ or →.
  - To decrease volume, press **Fn**+**F4**, then ↓ or ←.
- Using the Volume icon.

1. Double click the **Volume** icon on the Windows® taskbar. The **Volume Control** dialog box appears.
2. In the **Volume Control** and **CD Audio** columns, move the **Volume** sliders up to increase the volume and down to decrease the volume.

To play an audio CD

1. Insert the disc into the optical drive. See To insert a CD or DVD.
2. Select an option in the **Audio CD** window.
3. Click **OK**.

Copying files to a CD-RW or CD-R[1]

Before you write data to a CD-RW or CD-R, read the following notes to avoid a computer malfunction and ensure the best writing results:

- Deactivate the screen saver and exit anti-virus software.
- Deactivate memory-resident disc utilities to avoid data loss.
- Turn off the FindFast application if your computer has preinstalled Microsoft® Office applications, such as Excel, Word, and Outlook.
- Connect and use the AC adapter to power your computer.
- Use CD-Rs that are compatible with 8x speed.

✍ Your computer does not support 1x writing speed.

1. Insert the disc into the optical drive, and open the preinstalled Sony SonicStage software by clicking **Start**, and pointing to **Programs** and **SonicStage**, then clicking **SonicStage** from the submenu.

   ✍ See **SonicStage Help** for more information on using the program. Click **Start**, and point to **Programs** and **SonicStage**, then click **SonicStage Help** from the submenu.

2. Once you finish copying files to a CD-R that is readable in a CD-ROM drive, click **Finish** to complete the writing process before you eject the disc from the optical drive.

⚠ **Do not strike or shake the computer while writing data to a disc.**

[1] For computer models equipped with a CD-RW/DVD Combo Drive.

Playing DVDs

You can play DVDs in your computer's optical drive and view the video on a TV. The type of optical drive installed in or connected to your computer may vary, depending on the model you purchased.

- Watching DVDs on your computer
- Frequently asked questions

Watching DVDs on your computer

Your computer is equipped with a CD-RW/DVD Combo (optical) drive, which enables you to watch most DVDs from your computer.

To play a DVD while connected to the AC adapter

1. Close all open programs.
2. Insert the DVD into the CD-RW/DVD Combo drive.
3. Select a preinstalled DVD program in which to play the DVD. The preinstalled DVD program launches the video automatically. See Software Programs On Your Computer for a description of your preinstalled DVD software. For detailed instructions on how to use the preinstalled DVD software, see the help guide included with the DVD software.

To play a DVD while using battery power

1. Set the power management profile to **DVD**.
    1. Close all open programs.
    2. Right-click the **Battery** icon on the Windows® taskbar. See To display the Battery Information window for an illustration of the icon.
    3. Select **Profiles** from the shortcut menu, and then select **DVD** from the submenu. You can also select **Automatic Profile Selection**, which sets the power management profile to **DVD** whenever a DVD is inserted into the optical drive. See Conserving Battery Power for more information.
2. Click **Start** and **Shut Down,** and select **Restart,** then click **OK** on the **Shut Down Windows** dialog box to restart the computer.
3. Insert the DVD into the CD-RW/DVD Combo drive.
4. Select a preinstalled DVD program in which to play the DVD. The preinstalled DVD program launches the video automatically. See Software Programs On Your Computer for a description of your preinstalled DVD software. For detailed instructions on how to use the preinstalled DVD software, see the help guide included with the DVD software.

Some discs recorded at 20 or 24 bits may produce noise while playing. If you have audio devices connected, this may damage your hearing and the speakers. Reduce the volume before playing a DVD.

Do not switch the power saving modes while you are playing the DVD.

Do not use memory-resident utility software to speed up disc access. This may cause the computer to malfunction.

Frequently asked questions

How do I maintain CDs and DVDs?

- Avoid touching the surface of the disc with your fingers. Fingerprints and dust on the surface of the disc may cause reading errors.
- To clean the disc, hold the edge of the disc, and use a soft cloth to wipe the surface from the center out. If the disc is badly soiled, moisten a soft cloth with water, wring it out well, and use it to wipe the surface of the disc from the center out. Wipe off any remaining moisture with a dry, soft cloth.
- Do not clean the disc with solvents (such as benzine, thinner, commercially available cleaners, or anti-static spray), which may damage the disc.
- Do not drop or bend the disc.

Why does my computer freeze when I try to read a disc?

The disc your computer is trying to read may be dirty or damaged. Restart the computer, and eject the disc from the optical drive. Examine the disc for dirt or damage. If the disc is dirty, see How do I maintain CDs and DVDs? for instructions on how to clean it.

Why won't the drive tray open?

- Make sure the computer is on.
- Press the Eject button on the optical drive cover.
- If the Eject button does not work, click **Start** on the Windows® taskbar, and click **My Computer**. Right click **DVD/CD-RW Drive**, and select **Eject** from the shortcut menu.
- If none of the above options work, insert a thin, straight object (such as a paper clip) in the manual eject hole to the right of the Eject button.

Why isn't the optical drive playing my CD or DVD properly?

- Make sure the CD or DVD was inserted into the drive with the label facing up.
- Make sure the necessary software program(s) is installed according to the manufacturer's instructions.
- If the CD or DVD is dirty or damaged, the computer will stop responding. Follow these steps:
    1. Restart the computer by pressing **Ctrl+Alt+Delete**, and selecting **Restart** from the **Shut Down** menu of the **Windows Security** dialog box.
    2. Remove the CD or DVD from the optical drive.
    3. Check the disc for dirt or damage. If you need to clean the disc, see How do I maintain CDs and DVDs? for instructions.
- If you are playing a CD or DVD and cannot hear sound, follow these steps:
    1. Double-click the **Volume** icon on the Windows taskbar, and click to cancel the **Volume Control** and **CD Audio Mute** check boxes.
    2. Check the volume setting in the audio mixer.
    3. If you are using external speakers, check the volume settings on the speakers and the connections between the speakers and the computer.
    4. Make sure the CD audio feature is enabled and the correct driver software is installed. Follow these steps:
        1. Click **Start** on the Windows® taskbar, and point to **Setting** and **Control Panel**, then click **System**. The **System Properties** window appears.
        2. Select the **Hardware** tab, and then click **Device Manager**. The **Device Manager** window appears.

3. Double-click the listed **DVD/CD-ROM** drive. The **Properties** window appears.

4. Click the **Properties** tab, and click to select the **Enable digital CD audio for this CD-ROM device** check box, if it is not selected.

5. Select the **Driver** tab, and click **Driver Details** to confirm the driver software.

- Make sure an adhesive label was not attached to the CD or DVD. Adhesive labels can come off while the disc is in the optical drive and damage the drive or cause it to malfunction.
- If a region code warning appears, the disc may be incompatible with the optical drive. Check the DVD package to make sure the region code is compatible with the optical drive.
- If you notice condensation on the computer, do not use the computer for at least one hour. Condensation can cause the computer to malfunction.

Why did the computer (LCD) screen go blank?

- Your LCD screen may go blank if the computer has lost power or has entered a power saving mode (Standby or Hibernate). If the computer is in LCD (Video) Standby mode, press any key to activate the LCD screen. See Using power saving modes for more information.
- Make sure the computer is plugged into a power source and is on. The power indicator on the computer will be on if the computer is on.
- If your computer is using battery power, make sure the battery is inserted properly and is charged. See Using the Battery for more information.
- If the display mode is set to external display, use the **Fn+F7** key combination. See Selecting a Display Mode for more information.

Why don't my changes appear on the computer (LCD) screen?

You may need to refresh the computer screen. Press the Windows key and press **D** twice.

Printer Connections

- Printing With Your Computer

Printing With Your Computer

You can connect a universal serial bus (USB) printer or a parallel port printer to your computer. To print properly, the printer you connect must be compatible with the Microsoft® Windows® operating system installed on your computer.

- Connecting a printer
- Disconnecting a printer
- Frequently asked questions

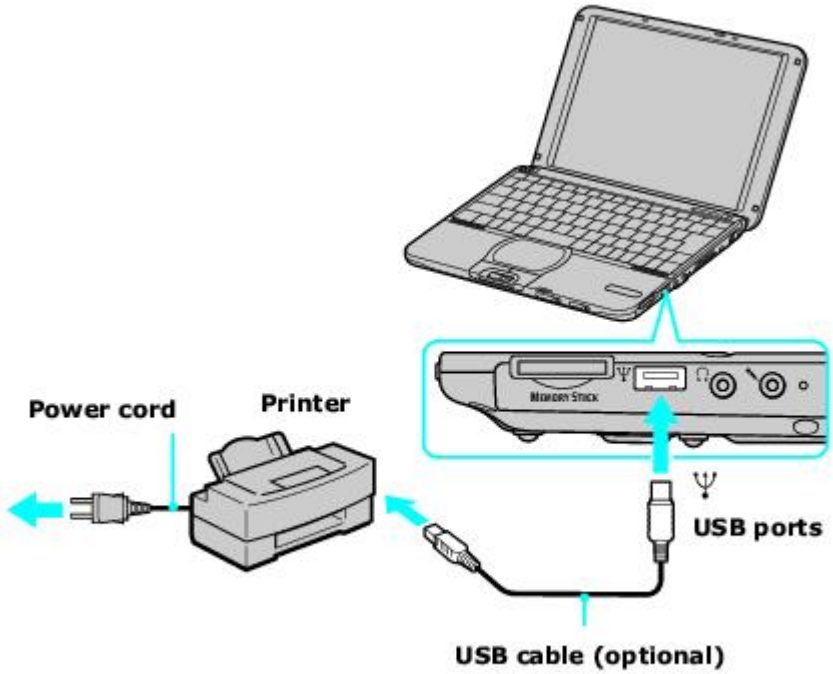
Connecting a printer

Your computer is compatible with many popular printers. In many cases, you can simply connect the printer to the computer and begin printing. Some printers require separate driver software installation. See the instructions that accompanied your printer for more information. If you cannot print once you have connected your computer to your printer, see Frequently asked questions in this section for more information.

To connect a USB printer

1. Locate a USB port on the computer and the printer.
2. Plug the USB cable into the USB port on your computer.
3. Plug the other end of the USB cable into the USB port on the printer.

Connecting a USB Printer Cable



See the manual that came with the USB printer for more information on its installation and use.

Disconnecting a printer

If your computer is turned off, simply unplug the printer cable from your computer's USB port.

To disconnect a printer while the computer is on

1. Double-click the **Unplug or Eject Hardware** icon on the taskbar. The **Unplug or Eject Hardware** window appears.
2. Select the printer **in the Hardware devices** window, if it is not already selected.
3. Click **Stop**. The **Stop a Hardware device** window appears.
4. Make sure the correct printer is selected, and click **OK**. A message appears stating it is now safe to remove the hardware device.
5. Unplug the printer cable from your computer's USB or Printer port.

Frequently asked questions

Why can't I print a document?

- Make sure the printer is on, and the printer cable is securely connected to the ports on your printer and computer. See Connecting a printer for more information.
- Make sure the printer is compatible with the Microsoft® Windows® operating system installed on your computer.
- You may need to install the printer driver software before you use the printer. See the instructions that came with your printer for information about installing these drivers.
- Change the default printer port setting, although this setting is generally correct for most printers.

1. Click **Start**, and point to **Settings**, then click **Printers**. The **Printers** window appears.
2. Right-click the printer, and select **Properties** from the shortcut menu.
3. Select the **Ports** tab, and select a different **LPT Port Number**.

- Using the Keyboard
- Using the Touch Pad
- Using Jog Dial Control
- Using Memory Stick Media
- Changing the Window Design of Sony Programs

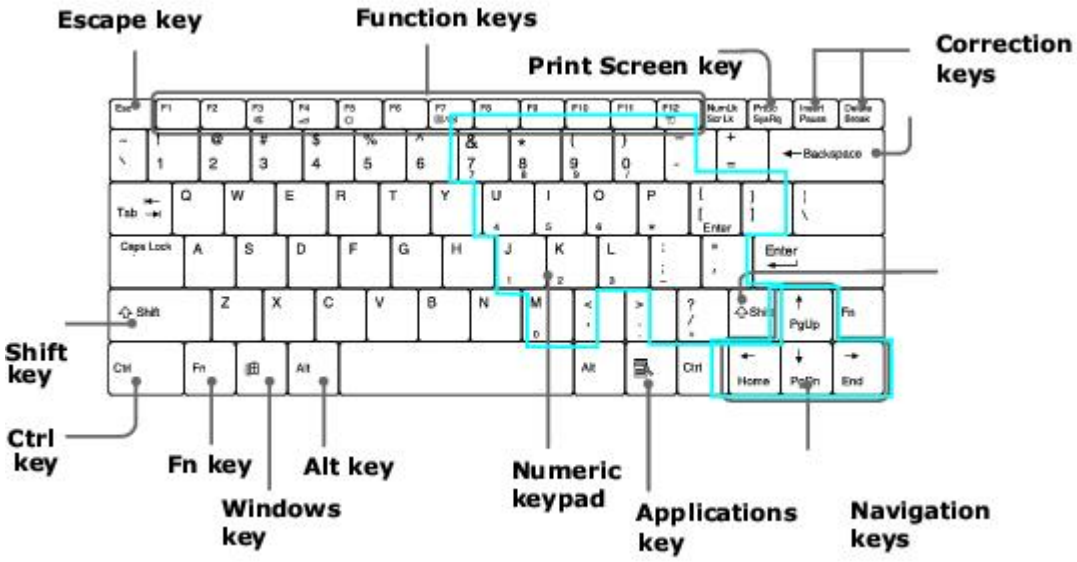
Using the Keyboard

Your keyboard is very similar to a typewriter's, but your computer keyboard has additional keys that perform specific computer-related tasks.

- Key locations and descriptions
- Combinations and functions with the Windows key
- Indicators
- Combinations and functions with the Fn key

Key locations and descriptions

Keyboard



Key **Description**

Numeric keypad Contains the keys found on a typical calculator. Use the numeric keypad area to type numbers or to perform mathematical calculations such as addition and subtraction. Numbers appear on the front beveled edge of the numeric keys. Press the Num Lock key to activate the numeric keypad. (When you do so, the Num Lock indicator lights up.) Press the Num Lock key again to deactivate the numeric keypad.

Arrow keys The Left, Right, Up, and Down arrow keys move the pointer on the screen and also function as the Home, End, Page Up, and Page Down keys, respectively.

Correction keys The Insert, Back Space, and Delete keys enable you to make corrections in your documents.

Function keys The 12 function keys along the top of the keyboard are used to perform designated tasks. For example, in many programs, F1 is the Help key. The task associated with each function key may vary from one program to the next.

Escape key The Esc (Escape) key is used to cancel commands.

Print Screen key The Print Screen key takes an electronic snapshot of the screen and moves it to the Clipboard. You can then paste the screen shot into a document and print it.

Operator keys
(Shift, Ctrl, Alt keys) Several keys are always used with at least one other key: Ctrl, Alt, and Shift. When held down with another key, the Ctrl (Control) and Alt (Alternate) keys offer another way to give commands. For example, in many programs, instead of choosing the Save command from a menu, you can hold down Ctrl and press S (referred to as Ctrl+S). The Shift key operates the same way as on a typewriter; it is used to produce capital letters or special symbols such as @ and $.

Windows key

The key with the Windows® operating system logo displays the Start menu; it is the equivalent of clicking Start on the taskbar. See Combinations and functions with the Windows key for more information.
Fn key The Fn key is used in combination with other keys to issue commands. See Combinations and functions with the Fn key for more information.
Applications key

The Applications key displays a shortcut menu of context-sensitive choices. Pressing this key is the equivalent of clicking the right mouse button.

Combinations and functions with the Windows key

Combination	Function
+ F1	Displays the VAIO Help and Support Center window.
+ Tab	Switches the selected button on the taskbar.
+ D	Displays the desktop.
+ E	Displays the My Computer window.
+ F	Displays the Search Results window, where you can find a file or folder. This is the equivalent of selecting Search from the Start menu.
+ Ctrl + F	Displays the Search Results - Computers window, where you can locate other computers. This is the equivalent of selecting Search, and then Computer from the Start menu.
+ M	Minimizes all displayed windows.
Shift + + M	Returns all minimized windows to their previous size.
+ R	Displays the Run window. This is the equivalent of selecting Run from the Start menu.
Fn + + Insert	Displays the System Properties window. This is the equivalent of selecting Control Panel, and then System from the Start menu.

Indicators

Indicator	Function
Power	
	Lights up when the power to the computer is on, flashes in Standby mode, and turns off when the computer is in Hibernate mode or off.
Battery	
	Lights up when the computer is using battery power, blinks when the battery is running out of power, double-blinks when the battery is charging.
Memory Stick®	
	Lights up when data is read from or written to the Memory Stick media. (Do not enter Standby mode or turn off the computer when this indicator is on.) When the indicator is off, the Memory Stick media is not being accessed.
Hard disk	
	Lights up when data is read from or written to the hard disk. Do not enter Standby mode or shut down the computer when this indicator is on.
Num Lock	
	Lights up when the number keys area in the numeric keypad are active. When the indicator is off, the alphanumeric character keys in the keypad area are active.
Caps Lock	
	Lights up when the letters appear in uppercase as you type. The Shift key lowers the case of typed letters when Caps Lock is on. When the indicator is off, the letters appear in lower case as you type (unless you hold down the Shift key).
Scroll Lock	
	Lights up when the screen scrolls differently. (Exactly how it scrolls depends on the specific program. This function does not work with all programs.) When the indicator is off, information moves across the display normally.
Wireless LAN	Lights up when the Wireless LAN function is running.

Combinations and functions with the Fn key

If you switch user identities during a computing session, the Fn+F7 key functionality (if available on your computer) will be interrupted. To switch to an external display or monitor, see Selecting a Display Mode for more information.

Combinations/

Feature	**Function**
Fn + (F3) Mute On/Off	Toggles the built-in speaker off and on.
Fn + (F4) Speaker volume	Adjusts the built-in speaker volume. An on-screen display appears notifying you when a change occurs.

To increase volume, press **Fn**+**F4**, then ↑ or →.

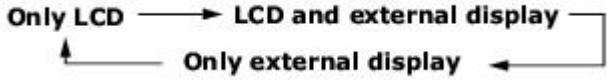
To decrease volume, press **Fn**+**F4**, then ↓ or ←.

Fn + (F5) Brightness control	Adjusts the brightness of the LCD.

To increase light intensity, press **Fn**+**F5** and then ↑ or →.

To decrease light intensity, press **Fn**+**F5** and then ↓ or ←.

Fn + LCD / VGA (F7) Switch to the external monitor/LCD	Toggles between the LCD, a connected external display, and both the LCD and external display.



Select one display at a time to playback DVDs. Connect the cable before you turn on the computer, otherwise Fn+F7 will not work.

Fn + (F12) Hibernate	Provides for the lowest level of power consumption. When you run this command, the state of the system and state of the peripheral devices are written to the hard disk and the system power is turned off. To return the system to its original state, use the power button to turn on power.
Fn + Esc Standby	Puts the system into Standby mode, a power management state. To return the system to the active state, press any key or press the power button.
Fn + E	Ejects the CD.
Fn + B Bass Boost	Toggles the bass-boost function off and on. This feature is available only while using headphones.

You can also carry out these functions using the Jog Dial Control. Some functions are not available until the Windows® operating system launches.

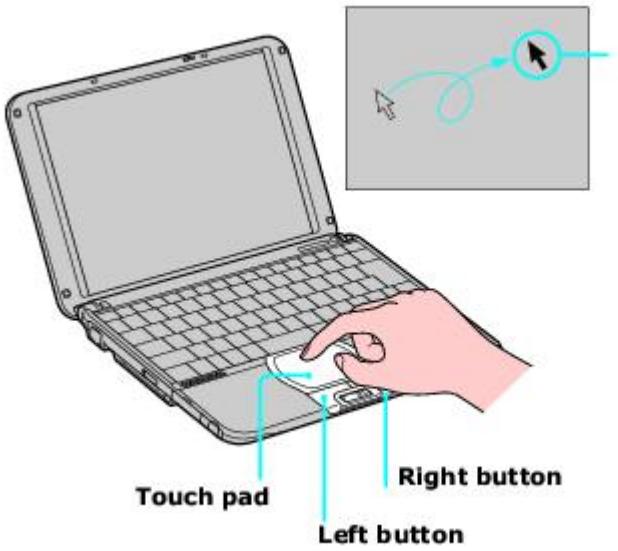
Using the Touch Pad

The keyboard contains a pointing device called a touch pad. You can point to, select, drag, and scroll objects on the screen using the built-in touch pad.

- Describing the touch pad
- Customizing the touch pad
- Frequently asked questions

Describing the touch pad

Locating and describing the touch pad



Action	Description
Point	Slide one finger on the touch pad to place the pointer on an item or object.
Click	Press the left button once.
Double-click	Press the left button twice.
Right-click	Press the right button once. In many programs, this action displays a shortcut menu of context-sensitive choices.
Drag	Slide one finger while pressing the left button.
Scroll	Move your finger along the right edge of the touch pad to scroll vertically. Move your finger along the bottom to scroll horizontally. (The scroll function is available only with programs that support a touch pad scroll feature.)

Customizing the touch pad

Sony Notebook Setup lets you customize your touch pad, such as enable or disable the touch pad. You can also open the Mouse Properties dialog box, which enables you to set your touch pad and mouse preferences, such as changing pointers, enabling or disabling the tapping feature, clicking both buttons simultaneously, and adjusting the touch pad speed.

To disable the touch pad

1. Click **Start** on the Windows® taskbar, and point to **Programs**.
2. Point to **Sony Notebook Setup**, and click **Sony Notebook Setup** in the submenu. The **Sony Notebook Setup** dialog box appears.
3. Click the **Touchpad** tab, and select **Disable Touchpad**.
4. Click **Apply**.
5. Click **OK**.

To enable the touch pad

1. Press the **Windows** key . The **Start** menu appears.
2. Press the **Up Arrow** key to select **Programs**, and press **Enter**.
3. Press the **Down Arrow** key to select **Sony Notebook Setup**, and press **Enter**. A submenu appears.
4. Press the **Down Arrow** key to select **Sony Notebook Setup** again, and press **Enter**. The **Sony Notebook Setup** dialog box appears.
5. Press the **Right Arrow** key to select the **Touchpad** tab.
6. Press the **Tab** key to select the **Default** button, and press **Enter**. A pop-up window appears.
7. Press the **Left Arrow** key to select **OK**, and press **Enter**. The **Enable Touchpad** option is automatically selected.
8. Press the **Tab** key to select the **Apply** button, and press **Enter**.
9. Click **OK**.

To open the Mouse Properties dialog box

- Right-click the **Touchpad** icon on the Windows® taskbar, and click **Mouse Properties** from the shortcut menu. The **Mouse Properties** dialog box appears.

Frequently asked questions

Why doesn't the touch pad work?

- You may have disabled the touch pad without connecting a mouse to the computer. See To enable the touch pad.
- Restart the computer to activate the touch pad again.
- If your touch pad is interpreting a single tap as a double-click, adjust the button assignments. Follow these steps:

  1. Press the **Windows** key . The **Start** menu appears.
  2. Press the **Up Arrow** key to select **Programs**, and press **Enter**.
  3. Press the **Down Arrow** key to select **Sony Notebook Setup**, and press **Enter**. A submenu appears.
  4. Press the **Down Arrow** key to select **Sony Notebook Setup** again, and press **Enter**. The **Sony Notebook Setup** dialog box appears.
  5. Press the **Right Arrow** key to select the **Touchpad** tab, and press **Alt**+**S** simultaneously. The **Mouse Properties** dialog box appears.
  6. Make sure the **Buttons** tab is open, and press the **Up Arrow** and **Down Arrow** keys to change the button assignments. Press the **Tab** key to move between shortcut menus.
  7. Press **Enter** to save your changes and close the dialog box.

- If you are still experiencing problems, make sure another mouse was not installed.
- You may need to use your Application Recovery CD(s) to reinstall the mouse drivers. See Using the Application Recovery CD(s) for more information.

Why doesn't the pointer move when I use the touch pad?

- Try restarting your computer. Follow these steps:

  1. Press the **Windows** key .
  2. Press **U**. The **Shut Down Windows** dialog box appears.
  3. Press **R** to restart the computer.
  4. Press **Enter**.

- If the computer does not restart,

  1. Press **Ctrl**+**Alt**+**Delete** simultaneously. The **Windows Security** dialog box appears.
  2. Press the **Right Arrow** key to select **Shut Down**.
  3. Press **Enter**.
  4. Press **R**.
  5. Press **Enter**.

- If you still cannot restart your computer, press and hold the power button to shut down the computer.
- If the pointer does not move while playing a disc, press **Ctrl**+**Alt**+**Delete** simultaneously to stop playback and restart the computer.

You may need to use your supplied Application Recovery CD(s) to reinstall the touch pad or mouse drivers. See Using the Application Recovery CD(s) for more information.

Using Jog Dial Control

Your computer is equipped with a Jog Dial Control below the keyboard. The Jog Dial Control enables you to open a program, folder, or document from a predefined list by rotating and pressing the Jog Dial Control.

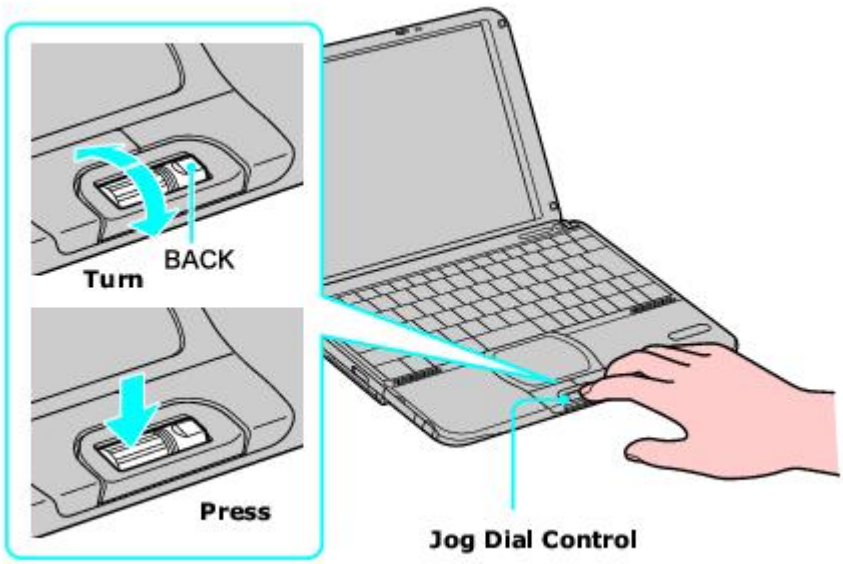
- Using VAIO Action Setup
- Locating the Jog Dial Control
- Using Launcher mode
- Using Guide mode
- Using the Jog Dial Control with Sony programs
- Using the Jog Dial Control with other programs
- Setting the timer

Using VAIO Action Setup

VAIO Action Setup manages the settings for your computer's Jog Dial control interface and enables you to set a timer to launch a program or document. For more information on customizing Jog Dial Control or setting the timer, right-click the Jog Dial Control icon or in the taskbar and click **Help Topics**.

Locating the Jog Dial Control

The Jog Dial Control



Using Launcher mode

The Jog Dial Control window is either in the launcher mode or in the guide mode. The Jog Dial Control window is in launcher mode until a software program is launched or the Jog Dial Control window becomes active. When an arrow is displayed next to an item in the Jog Dial Control window, you can display a submenu of that item by selecting it and pressing the Jog Dial Control. For more information, right-click the Jog Dial Control icon or , and click **Help Topics**.

To open the Jog Dial Launcher

- Press the Jog Dial Control.
- Double-click the Jog Dial Control icon on the taskbar.
- Press the Jog Dial Control while pressing **Ctrl** on the keyboard to switch from guide mode to launcher mode.

To use the Jog Dial Control

1. Turn the Jog Dial Control to select an item, and then press the Jog Dial Control. When you select an item, the Launcher mode changes to Guide mode.

Jog Dial Launcher

2. Turn or press the Jog Dial Control to use the desired function.To select another item, switch to Launcher mode by pressing the Jog Dial Control and the **Ctrl** key.

Using Guide mode

The Jog Dial Control window is either in the launcher mode or in the guide mode. Launcher mode changes to Guide mode when a program is active. Depending on the program, you can select items from the Jog Dial Guide window using the Jog Dial Control. With some Sony programs, you can change the Jog Dial window to List View, Simple Menu, and Full Menu. For more information, right-click the Jog Dial Control icon or , and click **Help Topics**.

Jog Dial Guide Dialog Box

Using the Jog Dial Control with Sony programs

If Sony programs that support the Jog Dial Control are active, you can use the Jog Dial's functions that are allocated to that program. For more information, see the program's online Help.

Using the Jog Dial Control with other programs

If the program you are using does not support the Jog Dial Control, you can still select menu items to perform the following functions:[1]

- Maximize window
- Minimize window
- Close window
- Scroll window
- Scroll the File menu

[1] Some programs do not support these functions.

Setting the timer

You can use the internal timer to open a program at a specific time. When set, the timer can launch programs even when the computer is off.

To set the timer

1. Right-click the Jog Dial Control icon or on the taskbar, and select **VAIO Action Setup**. The **VAIO Action Setup** dialog box appears.
2. In the left panel, click **Timer**. The right panel is updated.
3. Make sure the **Timer Setting** tab is open, and follow the on-screen instructions.

Using Memory Stick Media

This compact, portable, and versatile recording medium has a data capacity exceeding that of a floppy disk. The medium is specially designed for exchanging and sharing digital data with compatible products. Because it is removable, the media can be used for external data storage.

- Selecting Memory Stick media
- Inserting Memory Stick media
- Viewing the contents
- Write-protecting Memory Stick media
- Formatting Memory Stick media
- Removing Memory Stick media
- Frequently asked questions

Selecting Memory Stick media

The following two types of Memory Stick media can be used with your computer:

- MagicGate Memory Stick media (hereafter called MG Memory Stick media), which is provided with copyright protection
- Memory Stick media, which does not have the same copyright protection as MagicGate Memory Stick media

Some music files with secure copyright protection may be stored on MG Memory Stick media but not on regular Memory Stick media.You can also use MagicGate media-compatible devices to record and playback music when they are connected to your computer.

You can store mixed data on the Memory Stick media. For example, you can copy an ordinary file on a MG Memory Stick media that already contains music.

What is MagicGate Memory Stick media?

MagicGate Memory Stick media provides copyright protection that consists of authentication and encryption technology. Authentication technology ensures that protected content is only transferred between compliant devices and media. Protected content is recorded and transferred in an encrypted format to prevent unauthorized duplication or playback.

MG Memory Stick media has the MG mark.

Inserting Memory Stick media

Before using Memory Stick media, back up important data. The media slot accommodates only one Memory Stick media at a time.

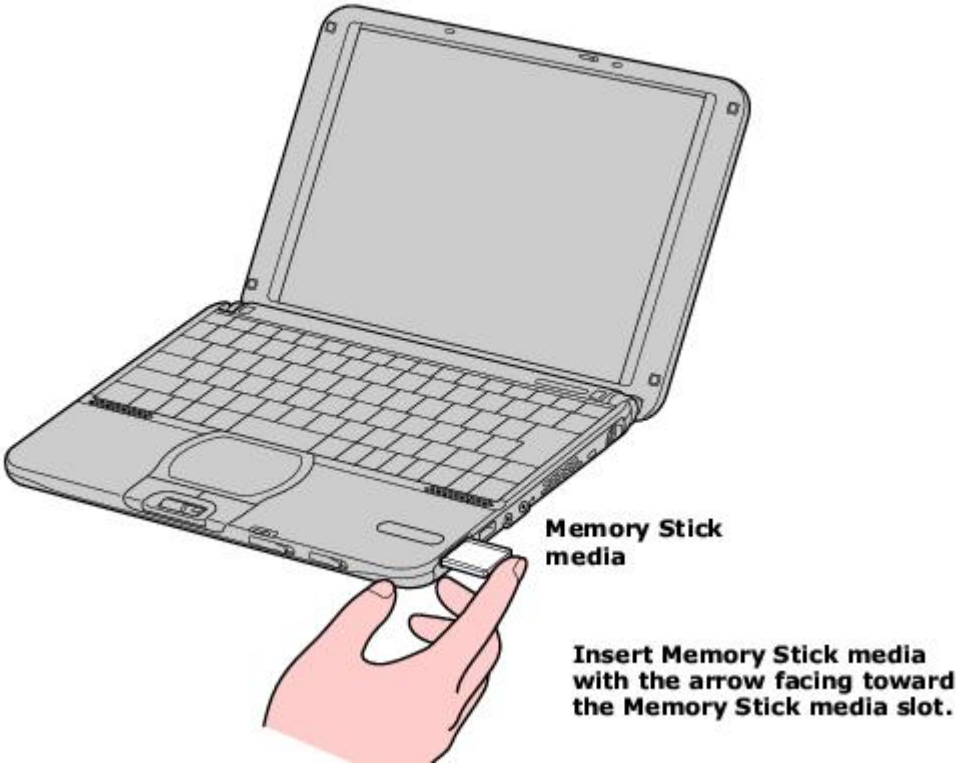
To insert Memory Stick media

1. Insert the Memory Stick media with the arrow facing up and toward the Memory Stick media slot.

   Inserting the media in the wrong direction may damage the connector pins.

2. Carefully slide the Memory Stick media into the slot until it clicks in place. The Memory Stick media indicator briefly flashes.

Inserting Memory Stick Media



Viewing the contents

Depending on the model you purchased, the Sony Memory Stick window appears automatically when you insert a Memory Stick media. From this window, you can choose to view, print, copy or organize your Memory Stick images or data. If the Sony Memory Stick window does not appear when you insert your Memory Stick media, then follow these steps.

To view the contents

1. Click **My Computer** on the desktop. The **My Computer** window appears.

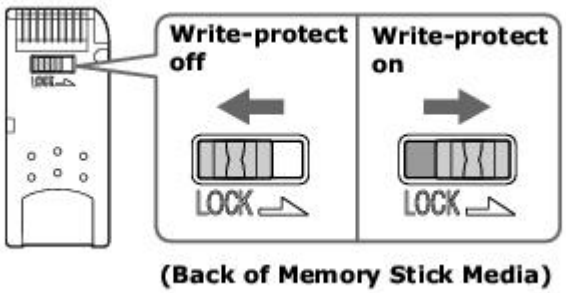
2. Double-click **Removable Disk**. The **Removable Disk** window appears, displaying the contents stored on the Memory Stick media.

Write-protecting Memory Stick media

Memory Stick® media is designed with a write-protect tab to protect data from accidental erasure or overwriting. Move the tab to the right or left to set or release write-protection. When the write-protect tab of the Memory Stick media is set to LOCK, data cannot be recorded or erased.

Write-protect off	Data can be saved on the Memory Stick media.
Write-protect on	Data can be read from but not saved on the Memory Stick media.

Using the Write-Protect Tab



(Back of Memory Stick Media)

Formatting Memory Stick media

Memory Stick® media is formatted for immediate use when you purchase it. If you need to reformat Memory Stick media, use the Memory Stick Formatter that is provided with the media. For more information about using Memory Stick Formatter, refer to Formatter Help.

Formatting Memory Stick media erases all data, including music data, previously saved to it. Before you reformat Memory Stick media, confirm that the media does not contain files you want to keep and back up important data.

To format Memory Stick media

1. Insert the Memory Stick media into the Memory Stick media slot. See Inserting Memory Stick media for more information.
2. From the **Start** menu, point to **Programs**, **Memory Stick Utility**, and then click **Memory Stick Formatter**. The **Memory Stick Formatter** dialog box appears.
3. Click to select the **Memory Stick** media drive, if it is not already selected.
4. Click **Start Format**.

Removing Memory Stick media

If the media is removed prematurely, a blue screen with an error message appears prompting you to continue or exit. Reinsert the media into the slot and press **Enter** to continue. This enables the media to finish reading or writing data.

To remove Memory Stick media

1. Wait a minimum of 10 seconds after the Memory Stick media finishes reading or writing data before removing the media.
2. Make sure the access light is off.
3. Push the Memory Stick media in toward the computer.
4. When the Memory Stick media ejects, pull it out.

Be careful when removing the Memory Stick media, as it may eject completely from the slot.

Frequently asked questions

Why can't I open my image files?

You may need to reformat your Memory Stick media.

Formatting Memory Stick media erases all data, including music data, previously saved to it. Before you reformat Memory Stick media, confirm that the media does not contain files you want to keep and back up important data.

1. Copy the data from the Memory Stick media onto your computer's hard disk to save data or images.
2. Format the Memory Stick media using Memory Stick Formatter software preinstalled on your computer. For instructions about formatting a Memory Stick media, see Formatting Memory Stick media.

Why can't I save music files onto my Memory Stick media?

- Only MagicGate Memory Stick media can be used with copyright protected data, such as music.
- Copyright protected music cannot be checked out to any Memory Stick media other than MG Memory Stick media.
- Recorded music is limited to private use only. Using recorded music for any other purpose requires permission of the copyright holders.
- Sony is not responsible for music files that cannot be recorded from a CD or downloaded from other sources.

Can I copy images from a digital video camera using Memory Stick media?

Yes, and you can view video clips that you have recorded with Memory Stick media-compatible video camera recorders.

How do I prevent damage to the Memory Stick media?

- Do not use the media in locations that are subject to static electricity or electrical noise.
- Do not touch the media connector with your finger or metallic objects.
- Do not attach labels other than the supplied label to a media.
- Do not bend, drop, or apply strong shock to the media.
- Do not disassemble or modify the media.
- Do not allow the media to get wet.

How do I extend the life of the Memory Stick media?

- Use the supplied storage case. See the instructions that came with your media for more information on its use.
- Do not use or store the media in a location that is subject to:
  - Extremely high temperatures, such as in a car parked in the sun
  - Direct sunlight
  - High humidity or places with corrosive substances

Changing the Window Design of Sony Programs

This feature is available with UI Design Selector-compatible programs only.

To change the window design

1. Click **Start**, and point to **Settings**, **Control Panel**, and **click UI Design Selector**.
2. Click **<< or >>** to view the designs.
3. To select a design that appears in the center window, click **Apply**. The **UI Design Selector** window design changes. The window design for your Sony software will match the **UI Design Selector** window.
4. Click **OK**.

Connecting Mice and Keyboards

- Using External Mice and Keyboards

Using External Mice and Keyboards

You can connect a universal serial bus (USB) mouse or keyboard to your computer. To function properly, the device you connect must be compatible with the Microsoft® Windows® operating system installed on your computer. For information about your computer's built-in keyboard and key functions, see Using the Keyboard in the Computer Features chapter.

- Connecting a mouse or keyboard
- Disconnecting a mouse or keyboard
- Frequently asked questions

Connecting a mouse or keyboard

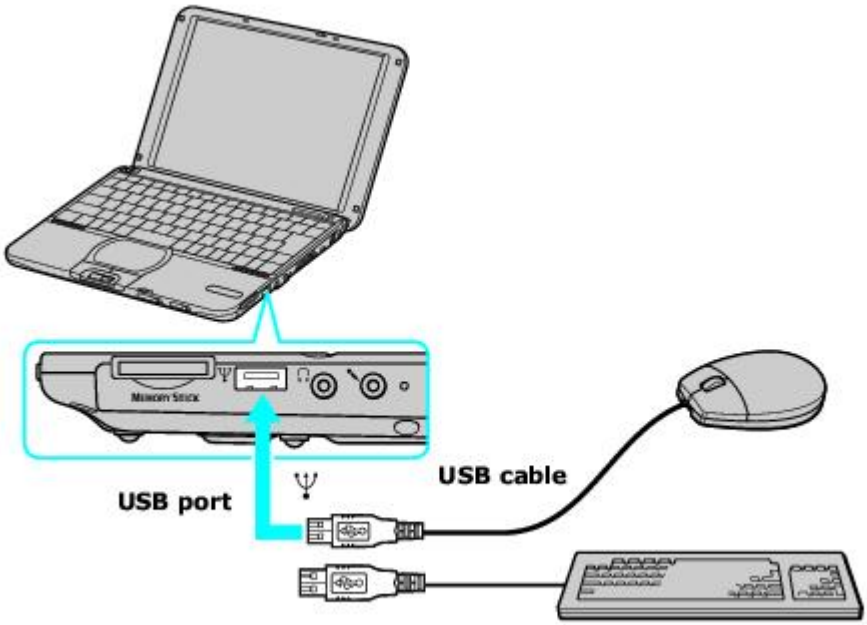
Your computer is compatible with many popular mice and keyboards. The New Hardware Wizard guides you through the software installation process. Some devices require separate driver software installation. See the instructions that accompanied your mouse or keyboard for more information. If the mouse or keyboard does not work once you have connected it to your computer, see Frequently asked questions for more information.

Your computer can be on or off when connecting a mouse or keyboard.

To connect a USB mouse or keyboard to your computer

1. Locate the USB port on your computer, port replicator, or docking station.
2. Plug the USB cable into the USB port on the computer. (One USB port supports one USB device.) The **New Hardware Wizard** appears.
3. Follow the on-screen instructions to complete the installation process.

Connecting a USB Mouse or Keyboard



See the manual that came with your mouse or keyboard for more information on its installation and use.

Disconnecting a mouse or keyboard

You can disconnect a USB mouse or keyboard when the computer is on or off. Disconnecting the USB mouse or keyboard when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

To disconnect the USB mouse or keyboard when the computer is off

- Unplug the USB cable from the USB port on the computer.
- Press and hold the power button. When the computer shuts down, press the power button again to restart the computer.

To disconnect the USB mouse or keyboard when the computer is on

1. Double-click the **Unplug or Eject Hardware** icon on the taskbar. The **Unplug or Eject Hardware** window appears.
2. Select the appropriate **USB device in the Hardware devices window, if it is not already selected**.
3. Click **Stop**. The **Stop a Hardware device** window appears.
4. Make sure **the USB device** is selected, and click **OK**. A message appears stating it is now safe to remove the hardware device.
5. Unplug the USB cable from the USB port on the computer.

Frequently asked questions

Why doesn't the computer recognize the USB mouse?

- Make sure the mouse is securely plugged into the USB port. See Connecting a mouse or keyboard for more information.
- You may need to install or reinstall the mouse driver software. Use the supplied Application Recovery CD to install the drivers. See Using the Application Recovery CD(s) for more information.

Why doesn't the pointer move when I use the USB mouse?

- Make sure another mouse was not installed.
- You may need to install or reinstall the mouse driver software. Use the supplied Application Recovery CD(s). See Using the Application Recovery CD(s) for more information.
- If you are playing a disc, press the **Ctrl**+**Alt**+**Delete** keys simultaneously to stop playback and restart the computer.
- If you still cannot use the pointer, restart the computer. You can restart the computer three different ways:
  - Press the **Windows** key , and press **U**. When the **Shut Down Windows** window appears, press **R** to select **Restart**, and press **Enter**.
  - Press the **Ctrl**+**Alt**+**Delete** keys simultaneously. When the **Windows Security** window appears, press the **Right Arrow** key to select **Shut Down**, and then press **Enter**. Use the **Down Arrow** key to select **Restart**, and press **Enter**.
  - Press and hold the power button. When the computer shuts down, press the power button again to restart the computer.

Floppy Disk Drives and PC Cards

- Using Floppy Disk Drives
- Using PC Cards

Using Floppy Disk Drives

You can connect a floppy disk drive to your computer, port replicator, or docking station. The floppy disk drive enables you to read data stored on a floppy disk.

- Connecting a floppy disk drive
- Inserting and removing floppy disks
- Disconnecting a floppy disk drive
- Carrying the floppy disk drive
- Frequently asked questions

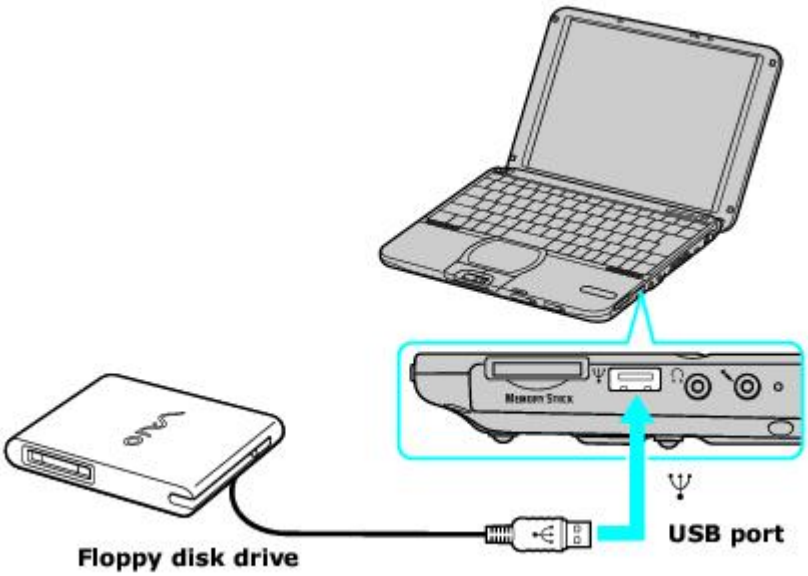
Connecting a floppy disk drive

You can connect a floppy disk drive when your computer is on or off. Connecting the drive when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

To connect a floppy disk drive

1. Close any active programs to prevent data loss.
2. Insert the USB connector (with the USB icon facing upward) into the USB port .

Connecting a Floppy Disk Drive



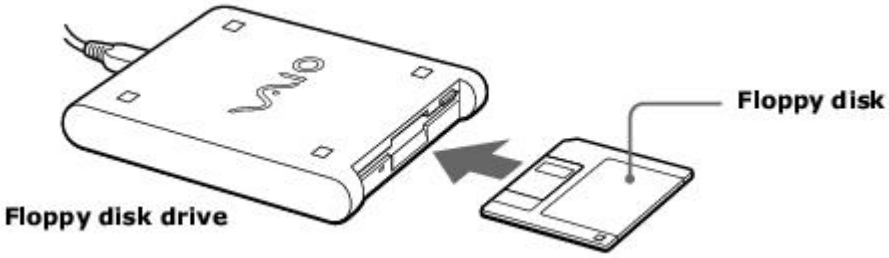
Inserting and removing floppy disks

Floppy disks are portable devices that store data. To protect your floppy disks, keep them away from magnets and direct sunlight or other heat sources.

To insert a floppy disk

1. Hold the floppy disk with the label facing up.
2. Push the floppy disk into the drive until it clicks into place.

Inserting a Floppy Disk



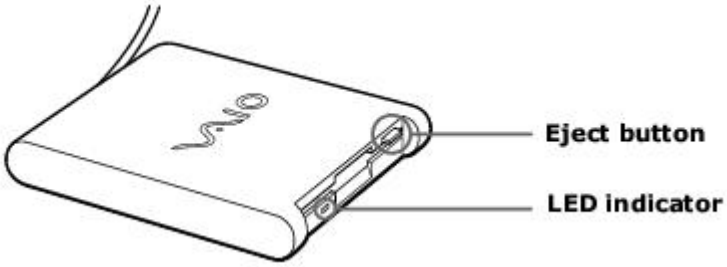
Do not open the shutter manually and touch the surface of the floppy disk.

To remove a floppy disk

1. Close all programs that were opened from the disk and wait for the LED indicator to turn off.
2. Push the Eject button, and remove the disk.

To avoid losing data, do not push the Eject button when the LED indicator is on.

Removing a Floppy Disk



Disconnecting a floppy disk drive

You can disconnect a floppy disk drive when the computer is on or off. Disconnecting the drive when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

To disconnect a floppy disk drive

1. Close any active programs to help prevent data loss.
2. Double-click the **Unplug or Eject Hardware** icon on the taskbar. The **Unplug or Eject Hardware** window appears.
3. Select the floppy disk drive **in the Hardware devices window, if it is not already selected**.
4. Click **Stop**. The **Stop a Hardware device** window appears.
5. Make sure the appropriate device is selected, and click **OK.** A message appears stating it is safe to remove the hardware device.
6. Unplug the floppy disk drive from the USB port on the computer, port replicator, or docking station.

Carrying the floppy disk drive

Fold the floppy disk drive cable and connector into the side compartment on the floppy disk drive.

Carrying a Floppy Disk Drive

Frequently asked questions

Why doesn't the Unplug or Eject Hardware icon appear on the taskbar when the drive is connected?

The computer does not recognize that the floppy disk drive is connected to the computer. First, make sure the USB connector is properly inserted into the USB port. If you need to secure the connection, wait a few moments for the computer to recognize the drive. If the icon still does not appear, follow these steps:

1. Close all programs that were opened from the disk and wait for the LED indicator to turn off.
2. Push the Eject button, and remove the disk.
3. Reconnect the floppy disk drive by inserting the USB connector (with the USB icon facing upward) into the USB port.
4. Restart the computer by clicking **Start** on the Windows® taskbar, and **Turn Off Computer**, then **Restart**.

Why is the drive unable to write data to a floppy disk?

The floppy disk drive cannot write data to a disk if it is inserted into the drive improperly. See Inserting and removing floppy disks for instructions on how to insert the disk properly.

If the disk is inserted properly and you are still unable to write data to it, the disk may be write-protected. You can either use a floppy disk that is not write-protected or disable the write-protect feature.

Using PC Cards

Your computer includes one or more PC Card slots. A PC Card enables you to connect portable external devices, such as another hard disk drive or a PC Network Interface Card (NIC), to connect to a network.

See your VAIO® Computer Specifications for the type of PC Card that is compatible with your computer. These slots are compatible with CardBus. If your computer has more than one PC Card slot, use the lower slot for Type III PC Cards. You do not need to turn off your computer to insert or remove a PC Card.

- Inserting PC Cards
- Removing PC Cards
- Connecting and disconnecting PC Card drives
- Frequently asked questions

Inserting PC Cards

Your computer may contain PC Card slot protectors. Remove these protectors before you insert a PC Card into the slot. See To remove slot protectors.

To insert a PC Card

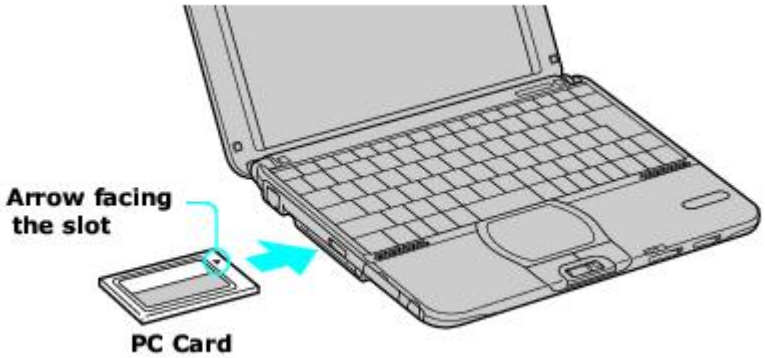
1. Make sure the front label of the PC Card is facing up.
2. Push the PC Card gently into the slot. The PC Card is automatically detected by your system. The **Unplug or Eject Hardware** icon appears on the taskbar, indicating your system detected the PC Card.

Do not force a PC Card into the slot. It may damage the connector pins.

When a PC Card is inserted, do not place your computer in a bag or case. Pressure or shock to a PC Card may damage your computer.

Touching the head of the PC Card will not damage to the connector pins, but damage may occur if the head of the PC Card is sticking out of the PC Card slot while the computer is being transported.

Inserting a PC Card



Removing PC Cards

You can remove PC Cards while the computer is on or off. PC Cards draw power from the computer when they are inserted into the PC Card slot, whether or not you use the card.

If you are not using your PC Card and you are using a battery as a power source, remove the PC Card from the PC Card slot to conserve battery power.

To remove a PC Card while your computer is on

1. Double-click the **Unplug or Eject Hardware** icon on the taskbar. The **Unplug or Eject Hardware** window appears.
2. Select the PC Card **in the Hardware devices window, if it is not already selected**.
3. Click **Stop**. The **Stop a Hardware device** window appears.
4. Make sure the PC Card is selected, and click **OK.** A message appears stating it is safe to remove the hardware device.
5. Push the Release button. The Release button pops out.
6. Push the Release button a second time. The PC Card pops out.
7. Gently pull the card out of the slot.

To remove a PC Card while the computer is off

1. Push the Release button once. The Release button pops out.
2. Push the Release button a second time. The PC Card pops out.
3. Gently pull the card out of the slot.

To remove slot protectors

1. Push the Release button once. The Release button pops out.
2. Push the Release button a second time. The slot protector pops out.
3. Pull the protector out of the slot. If you use a Type III PC Card, you need to remove both the top and bottom PC Card slot protectors.

Connecting and disconnecting PC Card drives

The PC Card drive enables you to read data stored on a DVD or CD. Your computer may come with an external PC Card drive, depending on the model you purchased. If you wish to purchase an optional PC Card drive, shop Sony online at http://www.sonystyle.com/vaio or contact your local retailer.

If you connect a non-Sony DVD drive to your VAIO® computer, DVD playback may not function properly. The supplied DVD software must be installed to play a DVD. For best performance, use a Sony compatible DVD drive.

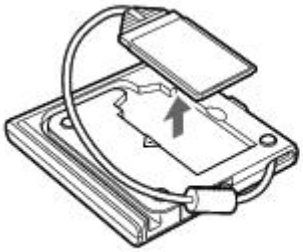
To connect a PC Card drive

You can connect a PC Card drive while the computer is on. Connecting the drive when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

Instructions on connecting an optical drive may vary, depending on the specific drive you purchased.

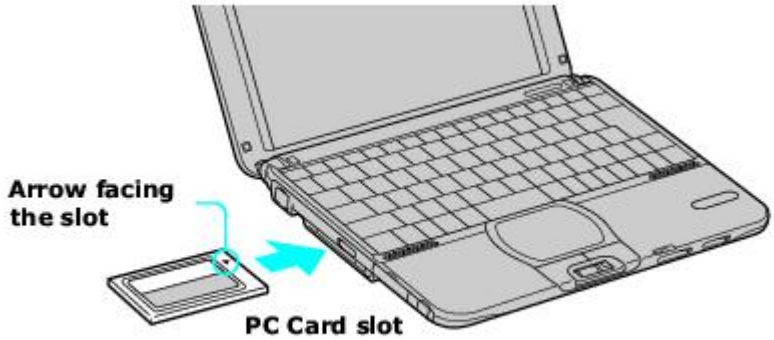
1. Remove the PC Card from the bottom of the optical drive.

Removing a PC Card



2. Insert the PC Card into the PC Card slot with the arrow facing the slot. See To insert a PC Card for more information.

Connecting a PC Card Drive



Remove the protective cover that is attached to the lens of the optical drive before you use the drive. See Inserting and Ejecting CDs or DVDs for information on how to open the optical drive to access the lens.

See the manual that comes with your optical drive for more information on its installation and use.

To disconnect a PC Card drive

1. Close any active programs to help prevent data loss.
2. Double-click the **Unplug or Eject Hardware** icon on the taskbar. The **Unplug or Eject Hardware** window appears.
3. Select the **PC Card drive in the Hardware devices window, if it is not already selected**.
4. Click **Stop**. The **Stop a Hardware device** window appears.
5. Make sure the **PC Card drive is selected**, and click **OK**. A message appears stating it is now safe to remove the

hardware device.

6. Eject the PC Card from the PC Card slot.

Frequently asked questions

Why doesn't my PC Card work?

- Make sure the PC Card is inserted properly. See Inserting PC Cards for more information.
- Make sure the PC Card is compatible with the Microsoft® Windows® operating system installed on your computer.
- Make sure any necessary driver software is installed.

Why doesn't my computer recognize attached devices?

For some PC Cards, if you alternate between normal power operation and the Standby or Hibernate modes while the card is inserted into the PC Card slot, the computer may not recognize the PC Card or the connected device. Restart your computer.

Why can't I insert my PC Card?

- Make sure you are inserting the card correctly. See Inserting PC Cards for more information.
- You may not be able to use some PC Cards or some functions of the PC Card with this computer. Check the manual that came with your PC Card for more information on its use.

Why does an exclamation mark (!) appear on the Device Manager tab in the System Properties dialog box?

You may not be using the most recent driver software provided by the PC Card manufacturer. Make sure the necessary drivers are installed. You may need to remove the driver software, and reinstall it.

Audio and Video Connections

- Using i.LINK Digital-Video Recorders
- Using Computer Monitors and Projectors
- Using Speakers
- Using Microphones

Using i.LINK Digital-Video Recorders

You can connect an i.LINK®[1] digital-video (DV) recorder, such as an i.LINK digital video camera recorder, to the i.LINK® S400 (IEEE 1394) port on your computer, port replicator, or docking station. The i.LINK digital video camera recorder is an external device that allows you to record images digitally.

- Connecting an i.LINK digital video recorder
- Disconnecting the i.LINK digital video recorder
- Using a digital video camera recorder
- Notes on connecting an i.LINK device
- Frequently asked questions

[1] i.LINK is a trademark of Sony used to designate that a product contains an IEEE 1394 connector. The i.LINK connection may vary, depending on the software application, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for more information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

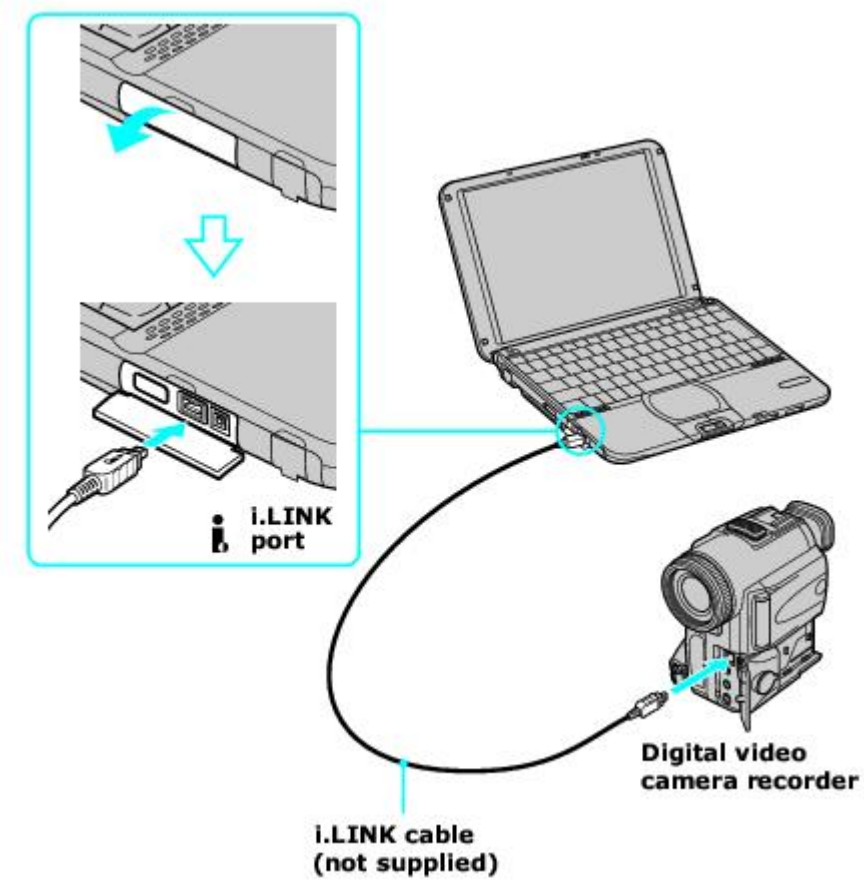
Connecting an i.LINK digital video recorder

You can connect an i.LINK digital video (DV) recorder when the computer is powered on or off. Connecting the DV recorder when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

To connect an i.LINK digital video recorder

1. Turn on the DV device and the computer.
2. Plug the i.LINK® cable into the i.LINK / DC In/Out port on the DV device.
3. Plug the other end of the i.LINK cable into the i.LINK port on your computer, port replicator, or docking station. The **Found New Hardware** window appears on the lower right corner of your screen.

Connecting an i.LINK Digital Video Camera Recorder



See the manual that came with your digital video camera recorder for more information on its installation and use.

Disconnecting the i.LINK digital video recorder

You can disconnect the i.LINK digital video recorder when the computer is powered on or off. Disconnecting the DV device when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

To disconnect the i.LINK DV recorder when the computer is off

1. Turn off the computer and the i.LINK DV device.
2. Unplug the i.LINK cable from the i.LINK / DC In/Out port on the computer.

To disconnect the i.LINK digital video recorder when the computer is on

1. Double-click **Safely Remove Hardware** icon on the taskbar. The **Safely Remove Hardware** window appears.
2. Select the i.LINK DV recorder **in the Hardware devices window if it is not already selected**, and click **Stop**. The **Stop a Hardware device** window appears.
3. Make sure **the i.LINK DV recorder** is selected, and click **OK**. A message appears stating it is now safe to remove the hardware device.
4. Unplug the i.LINK cable from the i.LINK / DC In/Out port on the computer.

Using a digital video camera recorder

Your computer comes with preinstalled driver software that is compatible with most Sony digital video camera recorders. If you purchased a camera that comes with its own driver software, install these drivers before you use the camera.

To view images

You can view the images captured by your digital video camera recorder three different ways. Select one set of instructions from the following list:

- If your digital video camera recorder is compatible with the preinstalled software, the **Digital Video Device** window appears when you connect the camera to the computer. Select the program you want to use in this window, and click **OK**.
- Click **Start**, and click **All Programs**. Select a software program in which to view your images.
- Click **Start**, and click **Experience VAIO**. Click **Movies**, and select a program in which to view your images.

Notes on connecting an i.LINK device

- Do not connect more than one digital video camera recorder at a time. The software supplied with your computer will not recognize multiple cameras.
- Do not connect an external device that requires power from the i.LINK port. The i.LINK port cannot supply power to the external device.
- The computer supports transfer rates up to 400 Mbps; however, the actual transfer rate is the lowest transfer rate of the external device.
- The i.LINK features available may vary depending on the software applications you use. See the documentation that accompanied your software for more information.

Frequently asked questions

Why can't I use the DV recorder?

You may not be able to use the DV recorder and the message, **DV equipment seems to be disconnected or turned off** may appear because the i.LINK[1] cable is not securely plugged into the i.LINK ports on the computer or camera. Unplug the connectors, and plug them in again. See Connecting an i.LINK digital video recorder for more information.

[1] i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Using Computer Monitors and Projectors

You can connect an external display (such as a computer monitor or a projector) to your computer, port replicator, or docking station.

- Connecting a computer monitor
- Connecting a projector
- Selecting a Display Mode
- Disconnecting a computer monitor or projector

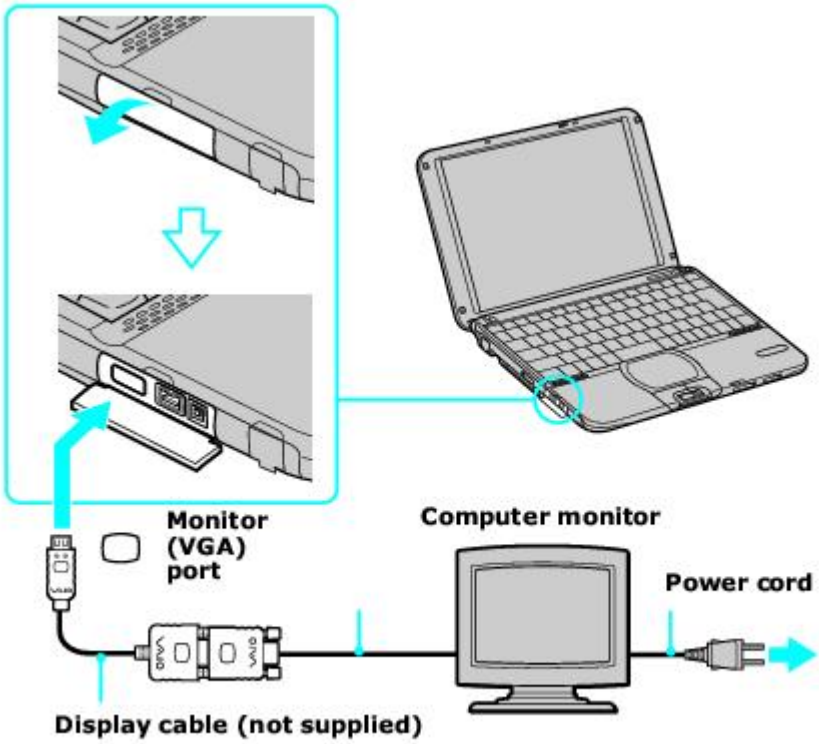
Connecting a computer monitor

You can display the images on your computer's LCD screen onto an external computer monitor. The external monitor displays the operations you perform on your computer.

To connect a computer monitor

1. Make sure the computer monitor is plugged into an AC outlet.
2. Turn off the computer.
3. Plug the display cable connector into the Monitor (VGA) port on the computer.
4. Turn on the computer monitor (if it is not already on), and then turn on the computer.
5. Press the **Fn**+**F7** key combination to toggle the display between your computer and the monitor. See Selecting a Display Mode for more information.

Connecting a Computer Monitor



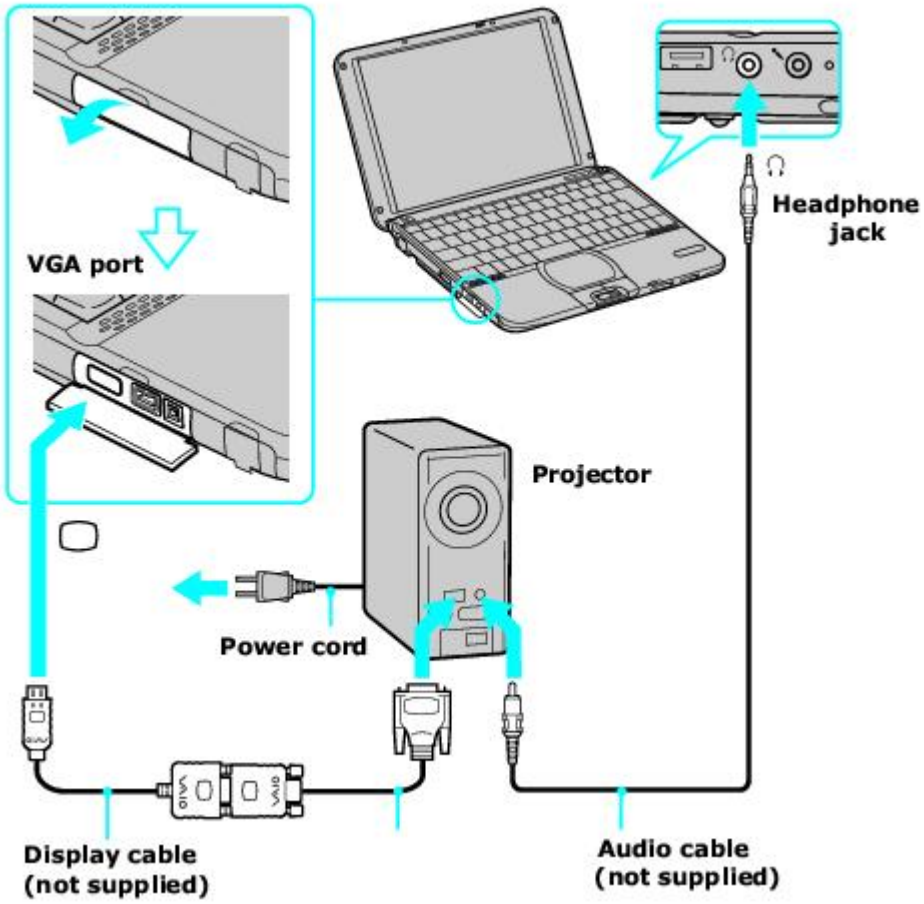
Connecting a projector

You can use a projector to display the actions and images on your computer's LCD screen.

To connect a projector

1. Plug the projector into an AC outlet.
2. Turn off the computer.
3. Plug the display cable connector into the Monitor (VGA) port on the computer.
4. Plug the other end of the display cable into the projector.
5. Plug the audio cable connector into the Headphone jack on the computer.
6. Plug the other end of the audio cable into the projector.
7. Turn on the projector (if it is not already on), and then turn on the computer.
8. Press the **Fn**+**F7** key combination to toggle the display between your computer and the projector. See Selecting a Display Mode for more information.

Connecting a Projector



See the manual that came with your projector for more information on its installation and use.

Selecting a Display Mode

This computer uses the Intel® 82815 video controller. When you connect your computer to an external display, you can switch the display mode between your computer's LCD display and the external display, using shortcut keys or the Display Properties settings.

Shortcut keys Result

Fn+ LCD / VGA (F7) Toggles between the LCD, a connected external display (projector or computer monitor), and both the LCD and external display.

Select one display at a time.Connect the cable before you turn on the computer, otherwise **Fn**+**F7** will not work.

To switch the display mode using the Display Properties settings

1. Right-click the desktop, and click **Properties** from the drop-down list. The **Display Properties** dialog box appears.
2. Click the **Settings** tab, and then click **Advanced**. The **Intel® 82815 Graphics Controller Properties** dialog box appears.

Intel Graphics Controller Properties screen

3. Click the **Displays** tab and select the display settings by clicking the icon on the panel of your display choice. For more information, click the Help button.

If you cannot see your movie or DVD on the external display, change the monitor or TV setting by clicking on the Secondary icon and changing it to Primary .

You may not be able to display the notebook LCD screen and an external display or projector at the same time, depending on the types of computer displays and projectors you are using.

Turn on the notebook after you connect the external display.

Disconnecting a computer monitor or projector

You can disconnect the external computer monitor or projector by unplugging the display or Monitor (VGA) cable from your computer's port. Disconnecting the external display when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

Using Speakers

Your computer comes with built-in stereo speakers. If you wish to enhance the sound quality of your computer, you can purchase and connect external speakers. If you want to purchase speakers, make sure the speakers are designed for computer use. You can shop Sony online at http://www.sonystyle.com/vaio or contact your local retailer.

- Connecting speakers
- Disconnecting external speakers
- Adjusting the volume
- Enabling the audio feature
- Frequently asked questions

Connecting speakers

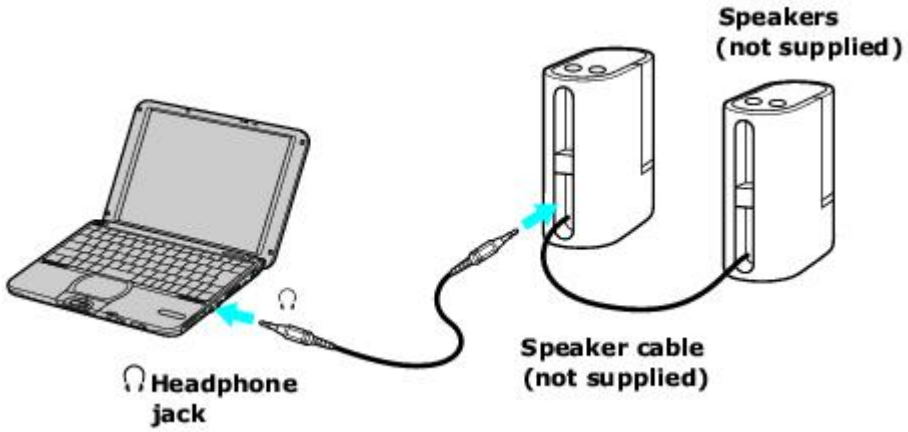
You can connect speakers to your computer to enhance the sound quality of your computer.

Do not place floppy disks on the speakers. The speakers' magnetic field may damage the data stored on the floppy disks.

To connect speakers to your computer

1. Turn down the volume of the speakers.
2. Plug the speaker cable into the Headphone jack on the computer.
3. Plug the other end of the speaker cable into the speaker.

Connecting External Speakers



See the manual that came with your speakers for more information on its installation and use.

Disconnecting external speakers

You can disconnect external speakers when the computer is on or off. Simply unplug the speaker cable from the Headphone jack on the computer.

Adjusting the volume

To adjust the volume for playing CDs and DVDs, use the **Volume** icon on the Windows® taskbar or the volume dial control. Adjusting the volume for playing CDs or DVDs does not adjust the volume for recording CDs or DVDs.

You can only adjust the recording volume in the **Recording Control** window. See Using a microphone or other device to record for instructions on how to open this window.

To adjust the volume of your speakers

1. Right-click the **Volume** icon on the Windows® taskbar, and select **Open Volume Control**. The **Volume Control** window appears.
2. Click and drag the **Volume Control** slider up to increase volume and down to decrease volume.
3. Click to cancel any **Mute** check boxes that are selected.

Sound device	Function
Volume Control	Adjust the sound level from the speakers or headphones.
Wave	Adjust the wavfile sound or the system sound of Windows.
SW Synth	Adjusts the internal or external synthesizer volume.
CD Audio	Adjust the volume of the CD in the optional optical drive.
Microphone	Adjust the internal or external microphone volume.
Telephony	Adjust the modem or telephone volume.
PC Beep	Adjust the beep sound when inserting or removing the PC Card and other devices.
Line[1]	Adjusts the sensitivity of volume input.

[1] On selected models only.

As a short-cut, you can use the Fn+F4 key combination and the arrow keys ↑ or → to change the volume setting. You can also use the Fn+F3 key combination to toggle the mute option on and off.

Enabling the audio feature

If you do not hear sound when playing a CD or DVD, you may need to enable the audio feature.

To enable the audio feature

1. Click **Start** on the Windows® taskbar, then **Settings**, and click **Control Panel**.
2. Click **System**. The **System Properties** window appears.
3. Select the **Hardware** tab, and click **Device Manager**. The **Device Manager** window, which lists the hardware devices, appears.
4. Double-click **DVD/CD-ROM drives**.
5. Double-click the listed drive name, and click the **Properties** tab.
6. Click the **Enable digital CD audio for this CD-ROM device** check box if it is not already selected.

Frequently asked questions

Why won't my speakers work?

- Make sure the speakers are properly connected and the volume is turned up loud enough to hear sound.
- Your speakers may not be designed for computer use.
- If the speakers have a mute button, set the button to off.
- If you have connected an audio cable to the Headphone jack, disconnect the cable and use the speaker cable that was supplied with the speakers.
- You may need to install or reinstall speaker driver software. Use the Application Recovery CD(s) to reinstall the drivers. See Using the Application Recovery CD(s) for more information.
- If you are using battery power, make sure the battery(s) is inserted properly and is charged. See Using the Battery for more information.

Why can't I hear sound from my speakers?

- If you are using battery power, make sure the battery is properly inserted and is charged. See Using the Battery for more information.
- If you are using an program that has its own volume control, make sure the volume control is properly set. See that program's help file for more information.
- Your speakers may be set to mute, the volume setting may be too low, or the audio option may be disabled. See Adjusting the volume and Enabling the audio feature for more information.

Why don't the Fn+F3 or the Fn+F4 key combinations work?

The computer may not recognize the **Fn**+**F3** and **Fn**+**F4** key combinations if the correct speakers are not selected. Follow these steps:

1. Right-click the **Volume** icon on the taskbar, and select **Adjust Audio Properties**.
2. Select the **Audio** tab, and click **Advanced** in the **Sound Playback** box. The **Advanced Audio Properties** window appears.
3. Click the **Speakers** tab, if it is not already selected.
4. Select the correct stereo speakers from the **Speaker setup** shortcut menu.

Why do I hear noise distortion while listening to music with speakers or headphones?

You may experience noise distortion while listening to music with speakers or headphones if the CPU control is set to Automatic Profile Selection. Use the preinstalled PowerPanel software to set the CPU control to Performance or Battery Life. If you are using a memory-intensive application, set the CPU to Performance.[1] Follow these steps:

1. Right-click the **CPU** icon on the Windows® taskbar, and click **Edit/Create Profiles**. The **Profile Editor** window appears.
2. In the left panel, click the power management profile that you want to set. Maximum Battery Life is the default selection when your computer is running on battery power.
3. In the right panel, double-click either **CPU Control (Plugged in)** or **CPU Control (Running on batteries)**, depending on the power source you are using. A menu of CPU Control options appears.
4. Select an option. If you are using a memory-intensive program, set the CPU control to **Performance**.
5. Click the **File** menu, and click **Save**.
6. Close the **Profile Editor** window.

[1] Applicable to models with a Crusoe processor.

Using Microphones

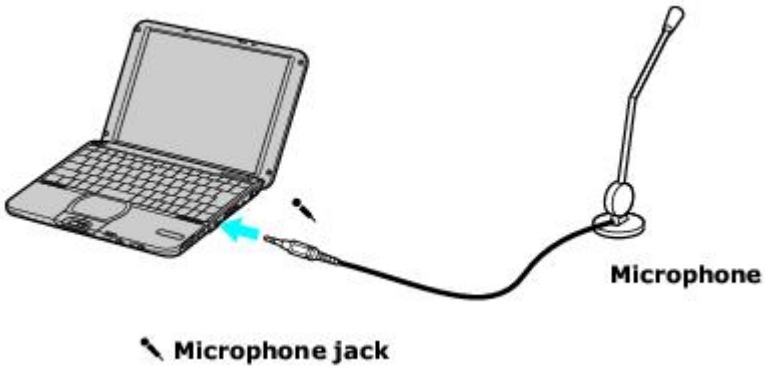
You can connect an external microphone to your computer to enhance the sound input to your computer. Make sure your microphone is designed for computer use. If you wish to purchase a microphone, shop Sony online at http://www.sonystyle.com/vaio or contact your local retailer.

- Connecting a microphone
- Disconnecting a microphone
- Using a microphone or other device to record
- Frequently asked questions

Connecting a microphone

Plug the microphone cable into the Microphone jack[1] on the computer.

Connecting a Microphone



See the manual that came with your microphone for more information on its installation and use.

[1] A protruding dot located next to the Microphone jack distinguishes this jack from the Headphone jack.

Disconnecting a microphone

You can disconnect an external microphone when the computer is on or off. Simply unplug the microphone cable from the Microphone jack on the computer.

Using a microphone or other device to record

You can record messages, memos, or other recordings in analog by connecting a microphone or other audio device to the Microphone jack on your computer, port replicator, or docking station and switching the jack functionality. The Microphone jack is for MIC IN (monaural).

To record from a microphone or audio device

1. Double-click the **Volume** icon on the Windows® taskbar. The **Volume Control** window appears.
2. Click **Properties** from the **Options** menu. The **Properties** window appears.
3. Click to select the **Recording** option in the **Adjust volume for** box, and click **OK**. The **Recording Control** window appears.
4. Click the **Select** check box at the bottom of the **Microphone** column, if it is not already turned on. Close the **Recording Control** window.
5. Click **Start**, and select **All Programs**, **Accessories**, **Entertainment**, and then **Sound Recorder**. The **Sound - Sound Recorder** window appears.

For help using Sound Recorder, click **Help** in the **Sound Recorder** window.

To adjust the volume for recording sound

You can only adjust the volume for recording in the **Recording Control** window.

1. Click **Start**, click **Settings**, and click **Control Panel**.
2. Click **Sounds, Speech, and Audio Devices**, and click **Sounds and Audio Devices**. The **Sounds and Audio Devices Properties** window appears.
3. Select the **Audio** tab, and click **Volume** in the **Sound recording** box. The **Recording Control** window appears.
4. Click and drag the **Microphone** slider up to increase volume and down to decrease volume.

Frequently asked questions

Why doesn't my microphone work?

If you are using an external microphone, make sure the microphone is properly plugged into the Microphone jack on the computer. See Connecting a microphone for more information.

Preinstalled Programs

- Software Programs On Your Computer
- DVgate Application Notes
- Program Support Information

Software Programs On Your Computer

Your computer may not be supplied with all of the software listed in Software overview, depending on the configuration you purchased. Preinstalled software may not be identical to retail versions or include supporting documentation.

- Program overview
- Frequently asked questions

Program overview

Adobe® Acrobat® Reader®
Adobe Systems Inc.

Acrobat Reader software allows you to view, navigate, and print electronic documents in Adobe's Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe® Photoshop® Elements Trial Version
Adobe Systems Inc.

Using state-of-the-art image editing tools, you can unleash your artistic ability and create digital images for print, e-mail, and posting to the Web. The versatile image capturing options enable you to start working with digital and traditional photos immediately. Explore extensive creative possibilities for your personal images with Adobe Photoshop Elements software. This trial version allows you to evaluate the software for 30 days, after which you can purchase the full program for a special price.

America Online®
America Online, Inc.

America Online is a popular Internet online service. Stay in touch with family and friends with easy-to-use e-mail. Manage your personal finances, get the latest news and sports scores, and chat with thousands of others who share your interests.

Drag'n Drop CD (On selected models)
DigiOn, Inc., and Easy Systems Japan Ltd.

Drag'n Drop CD is designed to be the most simple software to make your own CD. Users can create their own best AudioCD, or data CD that can be read in many PCs. With Drag'n Drop CD you can also create your own backup CD from the original CD that you own.

DVgate
Sony Electronics Inc.

Connect a digital video camera recorder to the i.LINK® port and capture your own video clips and still images. You can edit clips from your video, add new clips, and combine clips into new movie segments. You can also save your images in a variety of popular file formats.

EarthLink Network Total Access®
EarthLink, Inc.

An Internet Service Provider that supplies access, information, and assistance to its customers, introducing them to the Internet. Member benefits include e-mail, newsgroups, a Personal Start Page, free storage space for your personal Web site, a member magazine, and 24-hour technical support.

Microsoft® Word (On selected models)
Microsoft Corp.

Microsoft Word makes it easy to create common Web, e-mail, and print documents for use around the world. It embraces HTML as a first-class file format and extends Word's ease-of-use to the Web and e-mail. Word also extends that ease-of-use to international users, making it easy to create multilingual documents.

MovieShaker
Sony Electronics Inc.

Sony's original MovieShaker software creates personal movies that have transitions, background music, and text. Just import your video clips and "shake" with a click of the mouse. Your personal movies are easy to create and fun to share with family and friends.

PC-Cillin® 2000
Trend Micro, Inc.

PC-Cillin software provides portable, easy-to-use, real-time antivirus security at your computer's entry point (beaming, synchronization, Internet access) to defend against potential threats hidden inside files, e-mail, or on the Web.

PicoPlayer
Sony Electronics Inc.

PicoPlayer software is a video player utility that enables you to use Giga Pocket Personal Video Recorder functions on a computer that does not have Giga Pocket Personal Video Recorder installed. You can play Video Capsules created by Giga Pocket Personal Video Recorder, and, if a Giga Pocket Server is available on your home network, watch TV streamed from

the Giga Pocket Server and remotely control the Giga Pocket Server's TV programming functions.

PictureGear
Sony Electronics Inc.

This image management software displays images from your hard drive, a Sony digital still camera, or a Sony Mavica® camera. The images appear in a convenient light-table format, so that you can easily view the contents of an entire folder.

Quicken® 2002 New User Edition
Intuit Inc.

Quicken software is a fast, easy way to organize your finances. Quicken software works just like your checkbook, so it's easy to learn and use. You can even pay your bills online. Quicken software manages all of your finances, bank accounts, credit cards, investments, and loans. (Users of earlier versions of Quicken software must upgrade for a fee.)

QuickTime®
Apple Computer, Inc.

The versatile QuickTime software is used to play hundreds of different kinds of files, including video, audio, and virtual reality (VR) movies. You can play QuickTime files (referred to as "QuickTime movies") using QuickTime Player or any other application, such as a Web browser or word processor, that supports QuickTime software.

RealPlayer®
RealNetworks, Inc.

RealPlayer software is a high-quality streaming media player that supports many digital media formats. The user-friendly interface has enhanced navigation capabilities, allowing you to access and enjoy audio and video programming over the Internet. RealPlayer software is your gateway to a superb Internet multimedia experience.

Smart Capture
Sony Electronics Inc.

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK® connection between your notebook and a Sony Digital Handycam® Camcorder that supports the i.LINK interface. It allows you to capture compressed video or still images and save them to your hard disk drive or share via e-mail. A smart solution for computer, digital audio/video and network convergence.

Smart Connect (On selected models)
Sony Electronics Inc.

Smart Connect enables you to use an i.LINK® cable to connect your VAIO® computer to another VAIO computer that supports Smart Connect. You can then use one computer to copy, delete, and edit files on the other computer. You can also print from a printer attached to either computer.

SonicStage
Sony Electronics Inc.

This new jukebox application adds a host of new features to its predecessor, OpenMG Jukebox. Continuing to take advantage of Sony's copyright-protected ATRAC3 format for high-quality digital audio storage, SonicStage software sports a new music visualizer, a sleek new player skin design, audio CD burning capability, and a parametric equalizer for fine-tuning audio playback.

Sony ScreenBlast ACID (On selected models)
Sony Pictures Digital Entertainment

With the powerful Sony ScreenBlast ACID software you can create royalty-free music by utilizing its loop-based production tool, including unlimited tracks and enhanced effects.

Sony ScreenBlast Sound Forge (On selected models)
Sony Pictures Digital Entertainment

Sony ScreenBlast Sound Forge allows you to record, edit, and process mono or stereo audio files for your multimedia or Internet projects. Whether you want to use a number of professional effects, convert video into streaming media, or synchronize audio to video — this software has everything you need to create rich, immersive multimedia and Internet content.

Sony on Yahoo!
Yahoo! Inc.

Personalize your own web portal with Sony on Yahoo! Get a free webmail account, customized news and local weather reports, comics, instant messaging, and more.

VAIO Support Agent
Sony Electronics Inc.

VAIO Support Agent provides immediate, interactive, online support with information about your preinstalled software and answers to frequently asked questions.

WinDVD®
InterVideo, Inc.

WinDVD software is a simple-to-use DVD player including all the features you would expect to find in a standard consumer DVD player, while also offering advanced display and navigation features such as zoom, pan, bookmark, and time search.

Frequently asked questions

What do I do when my program stops responding or crashes?

- Try restarting your computer.
  1. Click **Start** on the Windows® taskbar, and click **Shut Down**.
  2. Press **R**, and click **OK**.
- If restarting your computer does not work, contact the software publisher or designated provider for technical support. See Program Support Information for contact information.

Why does the message, "You must insert the Application CD into your optical drive" appear, and the program does not start?

- Some titles require specific files that are located on the Application Recovery CD. Insert the disc, and try starting the program again.
- Your optical drive may not be reading the disc.
  - Make sure you place the CD in the tray with the label side facing up.
  - Make sure the optical drive is properly connected to your computer. See Connecting External Optical (Disc) Drives for more information.

Why can't the program find a file while a PC Card is inserted?

When a PC Card is inserted into a computer that is connected to the docking station, it may change the drive letters of the docking station disk drives or PC Card disk drives. If this occurs, the program you are using may not find certain files. Do one of the following:

- Remove the PC Card, and restart your computer. Do not insert the PC Card while using that program.
- Change the drive letters of the docking station disk drives or the PC Card disk drives. See the Windows® help file or the program guide for instructions on how to change the drive letters.

Which program do I use for CD-R/CD-RW functions?

Use the preinstalled Sony SonicStage software and Windows® software to create CDs on your VAIO® computer, if the specific model you purchased is preconfigured with all of the necessary components for CD-R and CD-RW capability.

You can also download the RealJukebox CD-burning component to create CDs, but it may interfere with your computer's normal system operations.

Why can't I use the DVgate program?

If your computer is using the Ultimate Battery Life profile as a power saving mode, you cannot use DVgate or Smart Connect software. Please select another profile. Preferably, connect your computer to AC power when using these features.

DVgate Application Notes

- Recording images to a digital video device
- Adjusting image resolution
- Saving to your hard disk drive

Recording images to a digital video device

If your system displays the message, "Failed to record to DV deck, please check deck's power status, cable connection...," while you are recording images to a digital video device using DVgate software, close all open programs, and restart your computer. Frequent recording of images to a digital video device while using DVgate may cause this situation to occur.

For more information on DVgate software, see the DVgate online help.

Adjusting image resolution

If the images on the LCD do not display smoothly, the resolution may not be set correctly.

To check the resolution

1. From the **DVgate Motion-Monitor** window, click **Setup**.

2. From the shortcut menu, point to **Settings**, and then select **Low Resolution**. The settings you change in this menu affect the images in the monitor window only. Movie data imported to your hard drive and images recorded to DV devices will not be affected.

Saving to your hard disk drive

In order to improve the performance of your computer's DVgate motion software, the hard disk drive on your computer has been formatted with two partitions, C and D. The C partition holds 40 percent and the D partition holds 60 percent of the entire drive capacity. DVgate software saves files to the D partition. This prevents large video capture from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment or format the D partition regularly.

To defragment a partition

1. Back up all files you want to save.

2. From the **Start** menu on the Windows® taskbar, point to **Programs**, **Accessories**, **System Tools**, and then click **Disk Defragmenter**. The **Disk Defragmenter** dialog box appears.

3. Select the drive you want to defragment from the list, and click **Defragment**. See the Windows® operating system Help guide for more information on defragmenting.

Program Support Information

- Sony Service Center

Adobe® Acrobat® Reader® (Adobe Systems Inc.)

Web site http://www.adobe.com/

e-mail techdocs@adobe.com

telephone 206-675-6126 (fee-based support)

fax 206-628-5737

hours M-F, 6 A.M.-5 P.M. (Pacific time)

America Online® (America Online, Inc.)

Web site http://www.aol.com/

telephone 800-827-6364

hours 7 days a week, 24 hours a day

EarthLink Network Total Access® (EarthLink, Inc.)

Web site http://support.earthlink.net/

e-mail support@earthlink.net

telephone 800-890-5128 or 800-890-6356

hours 7 days a week, 24 hours a day

PC-Cillin® 2000 (Trend Micro, Inc.)

Web site http://www.antivirus.com/pc-cillin/support/

telephone 510-859-0308; 900-820-8324[1]

hours M-F, 8 A.M.-5 P.M. (Pacific time)

[1] Support from 510-859-0308 is free of charge, but subject to delays. Support from 900-820-8324 is fee-based, but offers immediate response.

Quicken® (Intuit Inc.)

Web site http://www.intuit.com/support

telephone 900-555-4932; 800-644-3193[1]

hours M-F, 5 A.M.-5 P.M. (Pacific time)

[1] Support from 900-555-4932 is fee-based. Support from 800-644-3193 is automated and free of charge.

QuickTime® (Apple Computer, Inc.)

Web site http://www.apple.com

telephone 800-275-2273

hours M-F, 6 A.M.-6 P.M. (Pacific time)

RealPlayer® (RealNetworks, Inc.)

Web site http://service.real.com/rjoptions.html

e-mail http://service.real.com/help/call.html (online email form)

Sony Applications (Sony Electronics Inc.)

Web site http://www.sony.com/pcsupport

telephone 888-4-SONY-PC (888-476-6972)[1]

hours 7 days a week, 24 hours a day

[1] Support from 1-888-4-SONY-PC is free of charge for 90 days after the original date of purchase.

Windows® Operating System, Word (Microsoft Corp.)

Web site http://www.sony.com/pcsupport

telephone 888-4SONYPC (888-476-6972)[1]

hours 7 days a week, 24 hours a day

[1] Support from 1-888-4-SONY-PC is free of charge for 90 days after the original date of purchase.

WinDVD® (InterVideo, Inc.)

Web site http://www.intervideo.com

telephone 510-651-0888

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4-SONY-PC (1-888-476-6972) or find Sony Customer Service on the Web at http://www.sony.com/pcsupport.

VAIO AV Applications

Your VAIO® computer is preconfigured with a collection of audio and video (AV) applications that make it easy to use advanced multimedia technology. This section describes the VAIO® AV applications.

✍ Your computer may not be supplied with all of the software applications listed, depending on the system configuration you purchased.

Your computer's visual presentation of the VAIO AV applications may not appear exactly as shown in this section, depending on the specific computer model you purchased.

Overview of Preinstalled Software

DVgate
Sony Electronics Inc.

Connect a compatible digital video camera to your computer's i.LINK® port and capture video clips and still images. You can edit clips from your video, add new clips, and combine clips into new movie segments. You can also save your images in a variety of popular file formats.

MovieShaker
Sony Electronics Inc.

MovieShaker software creates personal movies that have transitions, background music, special effects, and text. Just import your video clips, and "shake" with a click of the mouse. Your personal movies are easy to create and fun to share with family and friends.

Network Smart Capture
Sony Electronics Inc.

Network Smart Capture manages the i.LINK®[1] connection between your computer and an i.LINK interface compatible digital camera or camcorder. You can capture and enhance video or still images to share with your family and friends over the Internet or through e-mail.

PictureGear Studio
Sony Electronics Inc.

PictureGear Studio is designed to creatively manage your digital pictures. With its easy-to-use features, you can quickly load images from your digital camera or camcorder, print high-quality photos, create custom labels, and design personalized photo albums or binders to share with friends and family.

SonicStage
Sony Electronics Inc.

The SonicStage jukebox application gives you all the tools you need to manage music on your computer. SonicStage software sports high-quality digital audio storage, a music visualizer, a sleek player skin design, audio CD burning capability (on computer models that include a CD recording device), and a parametric equalizer for fine-tuning audio playback.

SonicStage Premium
Sony Electronics Inc.

SonicStage Premium software is a special jukebox application that supports high-quality digital audio playback and recording from the Net MD player, FM Tuner, and DVD-RW devices in your VAIO® MX computer. Recording from external analog and digital audio devices, such as CD players and MiniDisc players, is also supported. SonicStage Premium software includes several standard jukebox features, including a music visualizer, audio CD burning capability, and a parametric equalizer for fine-tuning audio playback.

[1] i.LINK is a trademark of Sony used only to designate that a product contains an IEEE1394 connection. The i.LINK connection may vary, depending on the software applications, operating system and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other.

DVgate Software

✍ For detailed information about using DVgate software, refer to the online Help within the DVgate software.

Connecting a digital video camcorder

Turn off the power to your digital video camcorder before connecting it to your computer. After connecting the device, turn its power back on. You do not need to turn off the computer when connecting the camcorder.

DVgate software does not support MICROMV digital video cameras.

To use DVgate software with a digital video camcorder

- Under the Microsoft® Windows® XP operating system, do not capture DV- AVI video files to the root directory (the top level) of your hard disk drive. Instead, create a folder and capture files to this folder.
- Do not use DVgate software when the connected digital video device is in Timer Recording mode, as this may produce a malfunction in the device.
- Video captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video, or you can add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. Perform a separate capture for each audio mode you wish to use.
- DVgate software does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate software.
- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate software.
- Disable your screen saver program to avoid interruption during your capture sessions.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- The information displayed by the capture progress indicator may not be accurate for tapes that are recorded using a mixture of both SP and LP modes.
- Keep the video head of your digital video device properly cleaned. Anomalies that you see in captured data may be due to dust or other particles on the video head.
- The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

To use DVgate software to record AVI files to tape

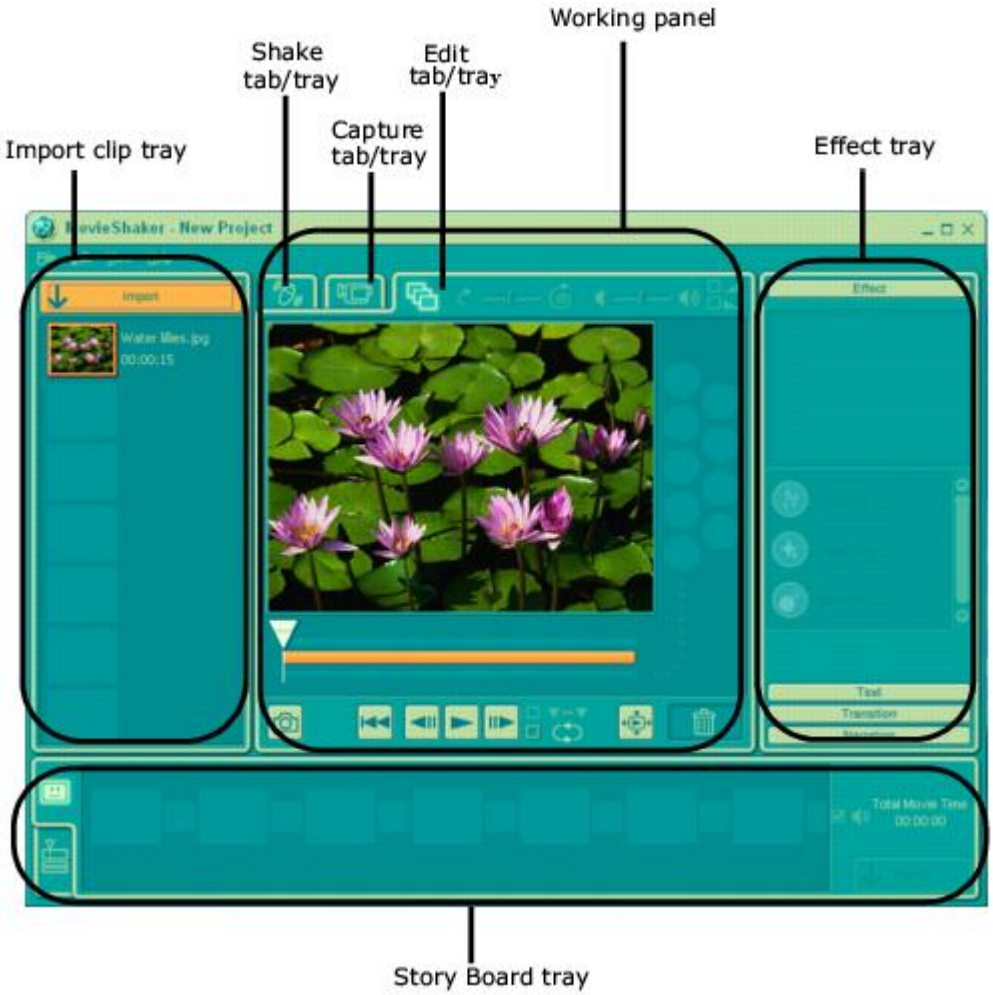
✍ You can record only AVI files. MPEG files cannot be recorded.

- Do not use DVgate software when the connected digital video device is in Timer Recording mode, as this could produce a malfunction in the device.
- Avoid recording problems, such as a single frame appearing in multiple frames, by closing other applications on your system while recording.
- You cannot use multiple audio modes on the same tape. If you have AVI files that use different audio modes, the files cannot be recorded at the same time, but must be recorded separately.
- The DVgate software does not support AVI files that are smaller than 4 MB.
- The DVgate software does not support hard disk compression.
- To maximize recording capabilities, video and audio data are not available while you are recording.
- If the DVgate software indicates that frames are dropped, try closing all open applications or defragmenting your hard drive.

MovieShaker Software

MovieShaker software can be used to create fun and innovative movies without any previous knowledge of film editing. In a few simple steps, you can turn a collection of video clips, still images, and audio files into a finished movie with special effects and music. You can save your personal video creation in a format that is compatible with most computers or save it to a tape in your compatible digital video (DV) or MICROMV [1] video camera.

MovieShaker software main window

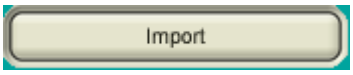


[1] MICROMV cameras are not supported on C1-series notebook models.

Creating movies with MovieShaker software

Using your imported clips, you can create a short movie using the Shake feature. The Shake feature selects clips from the Story Board tray, adds effects, and combines them randomly into a 30-second movie. After you "Shake" your video, you can edit it by adding effects and text, by adjusting the color and contrast, and by modifying its length.

Importing images and sound clips

1. Click 

. The **Import** file browser window appears.
2. Find the clips you want to add.
3. Click the clips. The files are added to the **Import** clip tray.
4. Repeat this process to gather each of the images and video and sound clips you want to use in your movie.

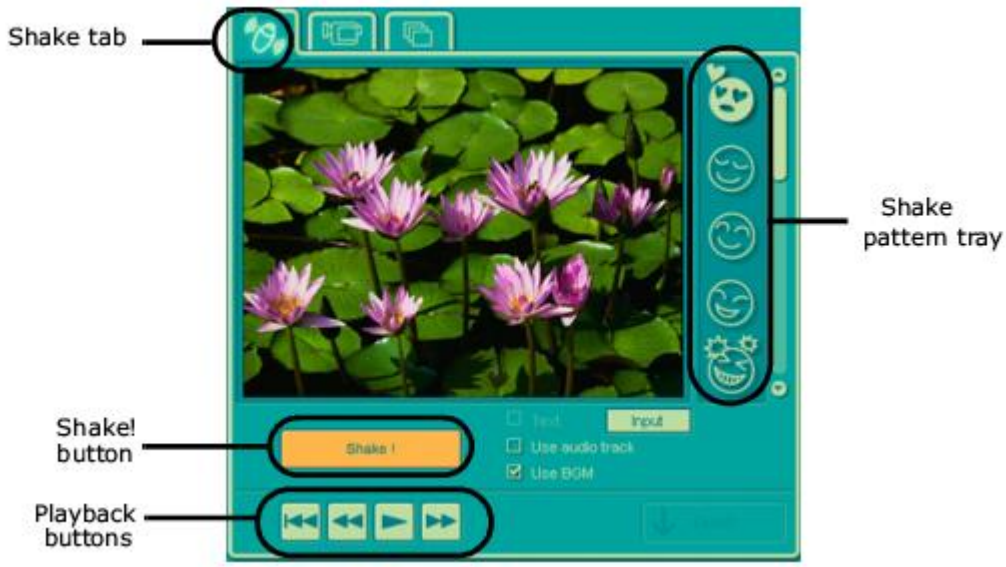
You can delete a clip from the Import clip tray by dragging the clip's icon to the trash icon located on the **Edit** tray of the working panel.

Importing image or sound files that are over 30 seconds in length may cause the MovieShaker software to stop responding.

Using the Shake feature

1. Click the **Shake** tab. The **Shake** tray appears
2. Select a mood by clicking a face in the **Shake** pattern tray.

Shake tray



3. Click the **Shake!** button. A 30-second movie is automatically generated.
4. **Optional:** Add text to your new movie by clicking on the **Input** button.
5. To preview, rewind, or fast forward your movie, use the **Playback** buttons.

Scenes created with the Shake feature begin with a black screen in the Shake tray window. Your scenes appear during movie playback.

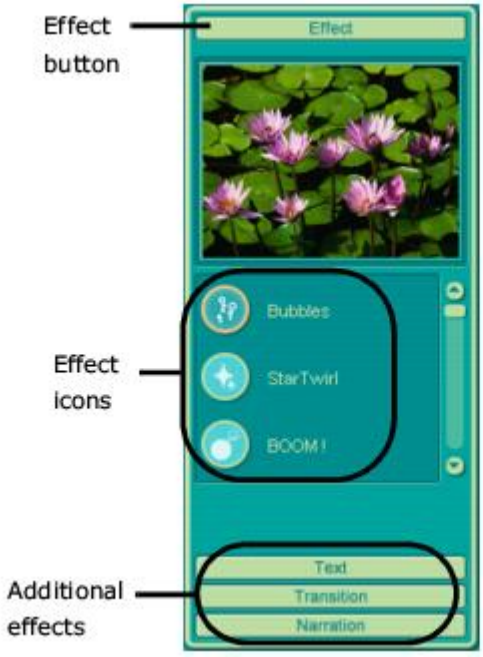
You can improve the image quality produced by the Shake feature (at the cost of longer Shake times) by turning off the "Shorten the Shake time" feature in the General panel of the **Setting** dialog box. See the **Menu reference** section of the online Help file for details.

Adding effects to a scene or a clip

1. Double-click or drag the desired clip or scene to move it to the **Story Board** tray.

2. Click the **Effect** button on the **Effect** tray.

Effect tray window (Effect button selected)



3. Drag the Effect icon you want to add from the **Effect** tray to the **Effect** palette on the **Edit** tray.

4. Click the **Play** button on the **Edit** tray to preview the effect. The added effect previews on the clip displayed in the **Effect** tray window.

A preview of the added effect is displayed in the **Effect** tray window. You can eliminate an effect by dragging it from the **Effect** palette to the trash icon on the **Edit** tray. See the online Help file for more information on adjusting effect duration and replaying clips and scenes.

Adding text effects to a scene or clip

1. Double-click or drag the clip or scene to move it to the **Story Board** tray.

2. Click **Text** on the **Editing** tray.

Effects Tray (Text button selected)

3. Click **Text Setting** to create customized text. The **Text Setting** dialog box appears. Enter your text, and select the font, size, color, and positioning for your text.

4. Drag the Text effect icon you want to add from the **Effect** tray to the **Effect** palette on the **Edit** tray.

5. Click the **Play** button on the **Edit** tray to preview the text effect. The clip displays the text effect in the **Effect** tray window.

✍ A preview of the added text and text effect is displayed in the **Effects** tray window. From the **Edit** tray, you can eliminate a text effect by dragging it from the **Effect** palette to the trash icon. See the online Help file for more information on adjusting Text effects.

Saving a movie

1. Verify that the movie or clips you want to save are located on the **Story Board** tray.
2. Click **Export** on the **Story Board** tray.
3. Select the format in which you want the movie to be saved.

✍ You can click on each export format to view its description and use.

Export window

Export
Export to file
Select the format of the file to be exported
MPEG1 (Attach to E-Mail) 160x112 10fps
MPEG1 (ImageStation) 160x112 10fps
QuickTime Movie 160x120 15fps
RealVideo 160x120 15fps
QuickTime Movie 320x240 30fps
MPEG1 320x240 30fps
DV-AVI 720x480 29.97fps
Select this to upload to ImageStation
Only the first 3 minutes of the movie will be exported
The login screen to ImageStation will appear after the file is created
Export to external device
Next
Cancel

4. Click **Next**.
5. Confirm that you want to continue.
6. Locate the folder to which you want to save the file, name your file, and click **Save**.

✍ The time required to export your movie file will vary with the format selected. See the online Help file for more information on exporting a movie.

Using the ImageStation online service with MovieShaker software

ImageStation℠ is an online service that allows you to store your pictures and movies on the Internet to share with family and friends. The ImageStation service requires an Internet connection and registration for the Web-based service. You must be connected to the Internet before uploading your pictures or movies using the MovieShaker software and ImageStation applications.

To upload MovieShaker files

1. Locate the clips or video files that you want to upload to the ImageStation℠ service, and import them to the **Import Clip** tray.
2. Drag the desired clips or video files to the **Story Board** tray.
3. Click the **Export** button. The **Export** window appears.
4. Select **MPEG1 (ImageStation)**, and click **Next**.

✍ The MovieShaker application creates a temporary file to store your images prior to uploading to the ImageStation service. This file is deleted after the upload process.

5. If you are a registered member, provide your login name and password.

   For first-time users, click **Register to ImageStation**. The ImageStation service registration wizard appears and guides you through the initial registration process. Follow the on-screen instructions.

ImageStation Login window

6. When the ImageStation application on your computer connects with ImageStation online, your files are uploaded to the Web site. The **Image Uploader** window appears and displays the Internet connection and upload status.

Image Uploader window

7. Go to http://www.imagestation.com to view your uploaded pictures or movies. Follow the on-screen instructions to access your ImageStation℠ account.

✍ The ImageStation Web site may ask you to complete a full login again if your current session is not active.

Network Smart Capture

Network Smart Capture manages the i.LINK®[1] connection between your computer and an i.LINK interface compatible digital camera or camcorder. You can capture and enhance video or still images to share with your family and friends over the Internet or through e-mail.

- The Network Smart Capture main window
- Capturing still images
- Capturing movie clips
- Capturing Web camera images
- Applying effects to your images and movies
- Managing your images and movies
- Using the ImageStation online service
- Getting more help

Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting i.LINK interface compatible peripherals to your computer, such as an optical drive or hard disk drive, make sure they are compatible with your computer's Microsoft® Windows® operating system and verify the required operating conditions of the devices.

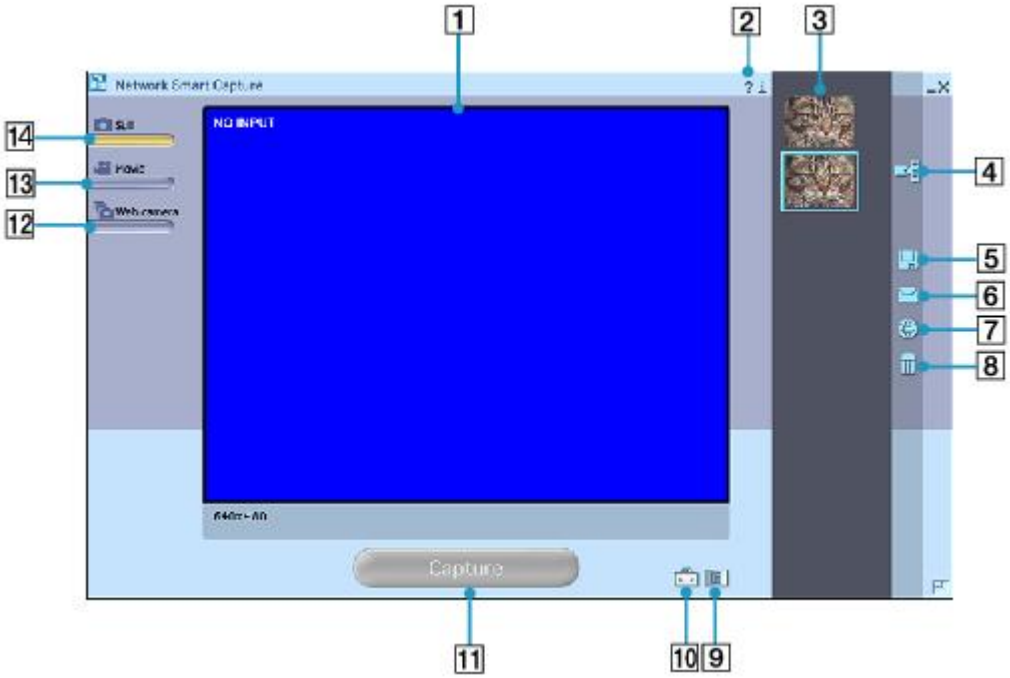
[1] i.LINK is a trademark of Sony used only to designate that a product contains an IEEE1394 connection. The i.LINK connection may vary, depending on the software applications, operating system and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other.

The Network Smart Capture main window

Network Smart Capture opens with a blue screen in the Finder Window, indicating there is no data input from a digital camera or camcorder. When you connect your digital camera or camcorder to your system with an i.LINK® cable and turn it on, an image appears in the main window. Some cameras and camcorders need to have recording media inserted before an image can be displayed in the Finder Window. Consult the manual supplied with your digital camera or camcorder for more information.

Consult the picture and table below for a description of icons and buttons on the main window.

Network Smart Capture Main Window



	Button or Icon	Description
1	**Finder Window**	Displays images in real-time
2	**Help icon**	Displays Help documentation
3	**Data list**	Displays thumbnails of captured images
4	**Display Image icon**	Opens captured images in the Finder Window
5	**Save As icon**	Enables you to save an image to your hard disk
6	**Send by e-mail icon**	Attaches a captured image to an e-mail
7	**Upload to Image Station icon**	Sends captured images to ImageStation℠ online folder
8	**Delete icon**	Deleted captured images
9	**Select Effect icon**	Enables you to customize an image
10	**Change Setting icon**	Enables you to set preferences

11	**Capture button**	Records the image in the Finder Window
12	**Web Camera button**	Captures still images according to specified settings
13	**Movie Mode button**	Captures moving images
14	**Still Mode button**	Captures still images

Capturing still images

The following information tells you how to set preferences and capture a still image.

To set Still mode preferences

1. Open Network Smart Capture:

   - (Microsoft® Windows® XP) From the **Start** menu, click **All Programs**, **Network Smart Capture**, and click **Network Smart Capture** from the submenu.

   - (Microsoft® Windows® 2000) From the **Start** menu, click **Programs**, **Network Smart Capture**, and click **Network Smart Capture** from the submenu.

2. Connect your i.LINK® compatible digital camera or camcorder to your computer with an i.LINK cable (optional). An image appears in the Finder Window.

3. Click **Still** near the upper-left of the screen.

4. Click the **Change Setting** icon near the bottom of the screen to view setting options for your still image capture. The **Still Image Setting** window appears.

Still Image Setting Window

The Still Image Options window has three tabs:

- **Basic** — Choose between **Normal** or **Self-timer** capture modes, and select a folder destination for your images.

- **Image Quality** — Select the image size in pixels, and adjust the image quality.

- **Common** — Enable or disable the shutter sound.

5. Click each tab to view options and set preferences. To apply effects to an image, see Applying effects to your images and movies.

To capture an image in Still mode

1. Use your digital camera or camcorder to locate the image you want to capture. When you see the desired image in the Finder Window, click **Capture**. You can capture a single image or several image at once.

   Your captured images are stored as thumbnail images in the Display List to the right of the Finder Window.

Image in Finder Window

2. Click the thumbnail images or arrows to the right of the Finder Window to view your captured images. As each image is captured, it appears in the Finder Window.

Capturing movie clips

The following information tells you how to set preferences and capture movie clips.

To set Movie mode preferences

1. Open Network Smart Capture:
   - (Microsoft® Windows® XP) From the **Start** menu, click **All Programs**, **Network Smart Capture**, and click **Network Smart Capture** from the submenu.
   - (Microsoft® Windows® 2000) From the **Start** menu, click **Programs**, **Network Smart Capture**, and click **Network Smart Capture** from the submenu.
2. Connect your i.LINK interface compatible digital camcorder to your computer with an i.LINK® cable (optional). An image appears in the Finder window.
3. Click **Movie** to activate Movie mode.
4. Click the **Change Setting** icon to view the available options for your movie capture. The **Movie Clip Setting** window appears.

Movie Clip Setting Window

The Movie Clip Setting window has three tabs:

- **Basic** — Select a folder destination for your movies when recording video clips.
- **Image Quality** — Adjust the image quality, reduce noise, and set the maximum recording time for your movie capture.
- **Common** — Enable or disable the shutter sound.

5. Click each tab to view options and set preferences. To apply effects to an movie, see Applying effects to your images and movies.

You can remove all special effects by clicking the No Effects button.

To capture a movie in Movie mode

1. Use your digital camcorder to locate the view(s) you want to capture. When you see the desired view in either the Finder Window or your camcorder's viewfinder, click **Record** to begin recording your movie. The Movie Player icon appears.
2. Click **Stop** when you have finished recording your movie. The first frame of your movie appears in the Data list to the right of the Finder Window. Network Smart Capture automatically stops recording according to the recording time set in the Movie Clip Setting window.
3. You can review your movie in the Finder Window by double-clicking the movie thumbnail in the data list.

Capturing Web camera images

The following information tells you how to set preferences and capture an image.

To set Web camera mode preferences

1. Open Network Smart Capture:
   - (Microsoft® Windows® XP) From the **Start** menu, click **All Programs**, **Network Smart Capture**, and click **Network Smart Capture** from the submenu.
   - (Microsoft® Windows® 2000) From the **Start** menu, click **Programs**, **Network Smart Capture**, and click **Network Smart Capture** from the submenu.
2. Click **Web camera** to activate Web camera mode.
3. Click the **Change Setting** icon to view the available options for your image capture. The **Web Camera Setting** window appears.

Web Camera Setting Window

The Web Camera Setting window has five tabs:

- **Basic** — Select a folder destination to store your images, set your maximum observation time, and choose your dial-up setting.
- **Capture Interval** — Set your Web camera to capture images at intervals or whenever there is movement.
- **Send** — Set image upload preferences.
- **Image Quality** — Select the image size in pixels, and adjust the image quality.
- **Common** — Enable or disable the shutter sound.

4. Click each tab to view options and set preferences. To apply effects to an image, see Applying effects to your images and movies.

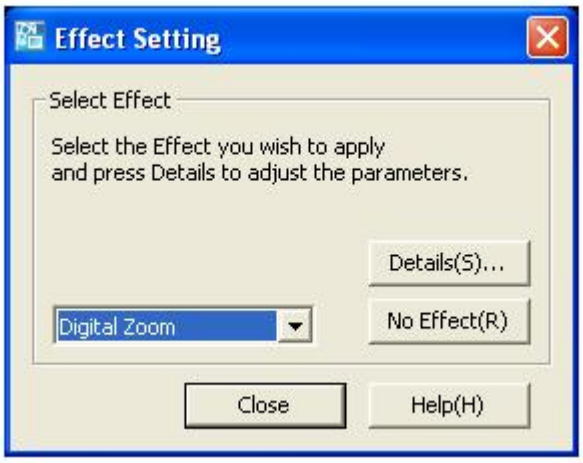
Applying effects to your images and movies

You can add effects to real-time images or movies displayed in the Finder Window. You can also use a different effect for each picture.

To open the Effect Setting window

1. Click the **Select Effect** icon near the bottom of the screen. The **Effect Setting** window appears.

Effect Settings Window



2. Use the drop-down list to view and select available effects.
3. Click **Details** to adjust settings for selected effects other than **Frame**.
4. Click **Apply**.

To remove an effect

- Select **None** from the drop-down list.

Managing your images and movies

The task buttons to the right of the Network Smart Capture window enable you to perform various functions with your images or movies.

- **Display Image** — Opens captured images in the Finder Window.
- **Save As** — Save still images in JPEG format and movie images in MPEG format to your desired location.
- **Send by e-mail** — Launches your e-mail program with a new message window containing the still image as an attachment.
- **Upload to ImageStation** — Send your still images online to the ImageStation Web site to share with your family and friends. The ImageStation service stores your still images online when you become a registered user. See Using the ImageStation online service.
- **Delete** — Discards any or all of your still images.

You must be connected to the Internet before attempting to upload or e-mail your still images or videos.

Using the ImageStation online service

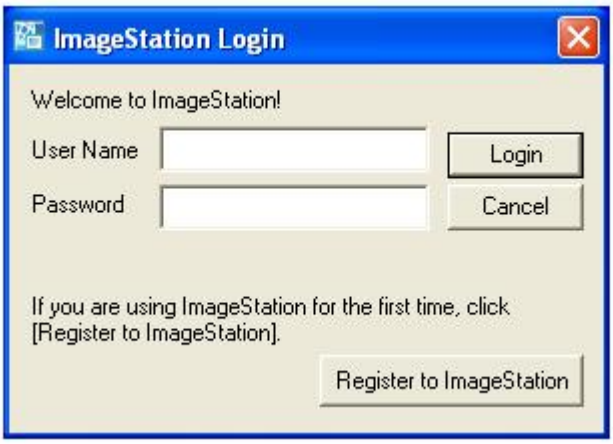
ImageStation℠ is an online service that allows you to store your images and movies on the Internet to share with family and friends. The ImageStation service requires an Internet connection and registration for the Web-based service. You must be connected to the Internet before uploading your images or movies with Smart Capture and ImageStation programs.

✍ The ImageStation preview feature is available when you upload two or more pictures or a movie. No preview is shown if a single picture is being uploaded.

To upload images and movies to the ImageStation Web site

1. Click the ImageStation icon on the right side of the screen. The ImageStation Login window appears.

ImageStation Login Window



- For first-time users, the ImageStation℠ registration wizard guides you through the initial registration process. Click **Register to ImageStation**, and follow the on-screen instructions.
- If you are already a registered member, type your login name and password, and click **Login**.

✍ It is recommended that your movie file size not exceed 254 MB if compressed or 2 GB if not compressed. Large movie files take longer to upload to the ImageStation Web site.

2. Go to http://www.imagestation.com to view your uploaded pictures or movies. Follow the on-screen instructions to access your ImageStation account. The ImageStation Web site may ask you to complete a full login again, if your current session is not active.

Getting more help

For more information about Network Smart Capture, see the program's online Help.

To view the online help

- (Microsoft® Windows® XP) From the **Start** menu, click **All Programs**, **Network Smart Capture**, and click **Help** from the submenu.

  (Microsoft® Windows® 2000) From the **Start** menu, click **Programs**, **Network Smart Capture**, and click **Help** from the submenu.

- Click the Help icon on the Network Smart Capture window.

Network Smart Capture Help icon

PictureGear Studio Software

PictureGear Studio software is designed to creatively manage your digital pictures. With its easy-to-use features, you can quickly load images from your digital camera or camcorder, print high-quality photos, create custom labels, and design personalized photo albums or binders to share with friends and family.

PictureGear Studio main window

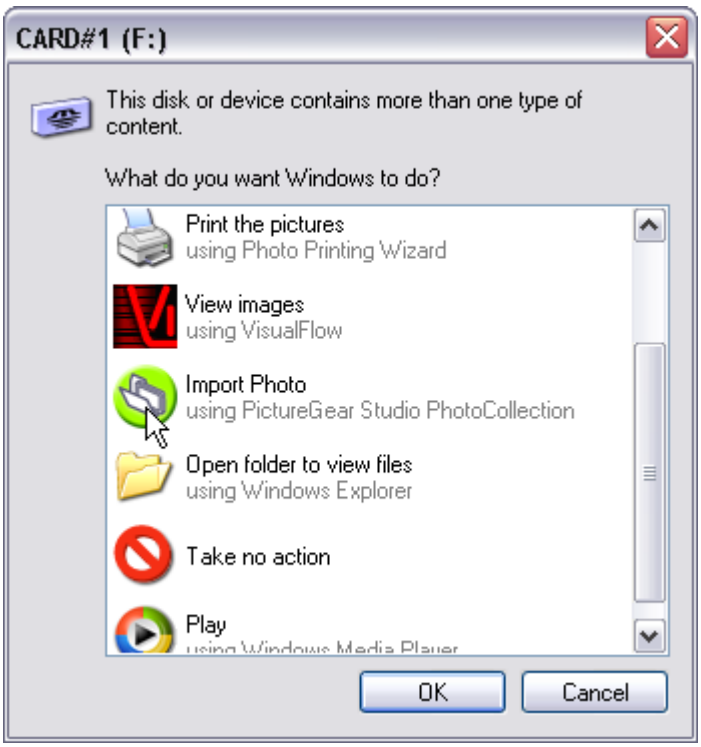
Photo albums, binders, and photo collections can only be viewed or edited using PictureGear Studio software. To share a PictureGear Studio creation over the Internet or by using another computer, use the Export feature. See the section, To export a photo album.

Using the Import Photo feature

Capture and import the pictures from your digital camera or camcorder to your computer. You can select your favorite pictures and place them in handy folders for future use.

When you initially connect your digital camera, camcorder or insert a Memory Stick® media, Windows® XP may attempt to recognize the device or media. An identification window may appear.

Windows XP device/media identification window

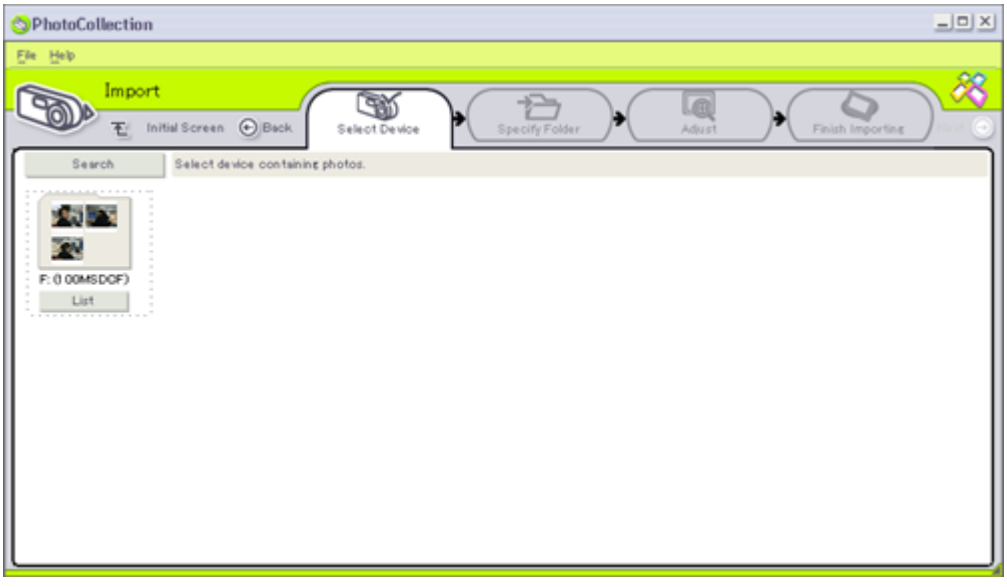


Select **Import Photo using PictureGear Studio PhotoCollection**, to proceed directly to the PhotoCollection Import Window (See Step 2).

1. Click **Import Photo**. Your connected digital camera, camcorder, or Memory Stick® media is displayed in a **Select Device** window.

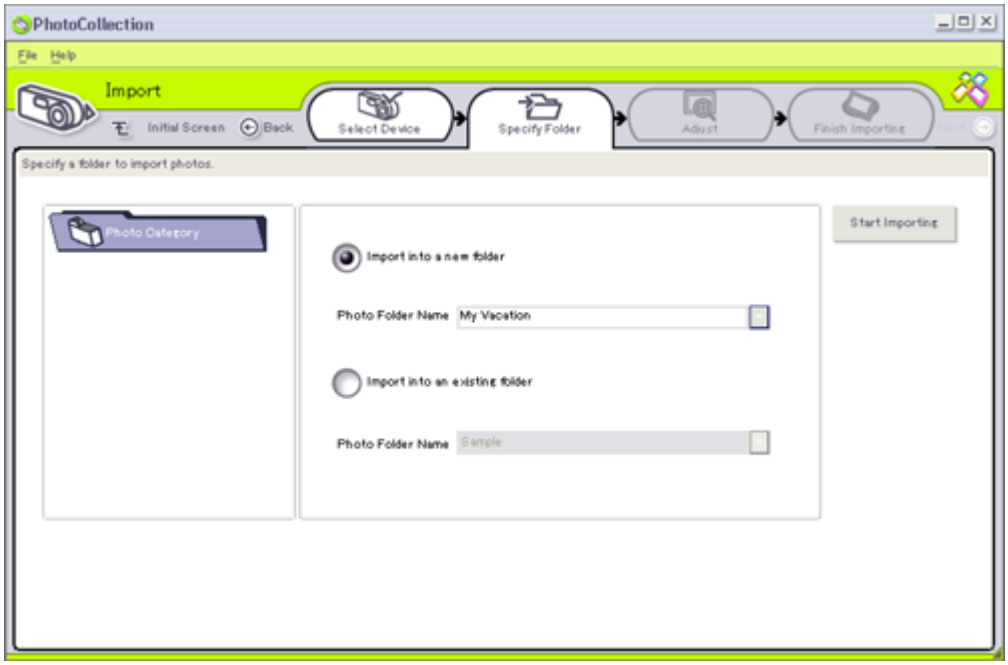
   ✍ Connect your digital camera or camcorder to your computer, or insert your Memory Stick media into the appropriate slot, before attempting to import pictures.

Select Device window



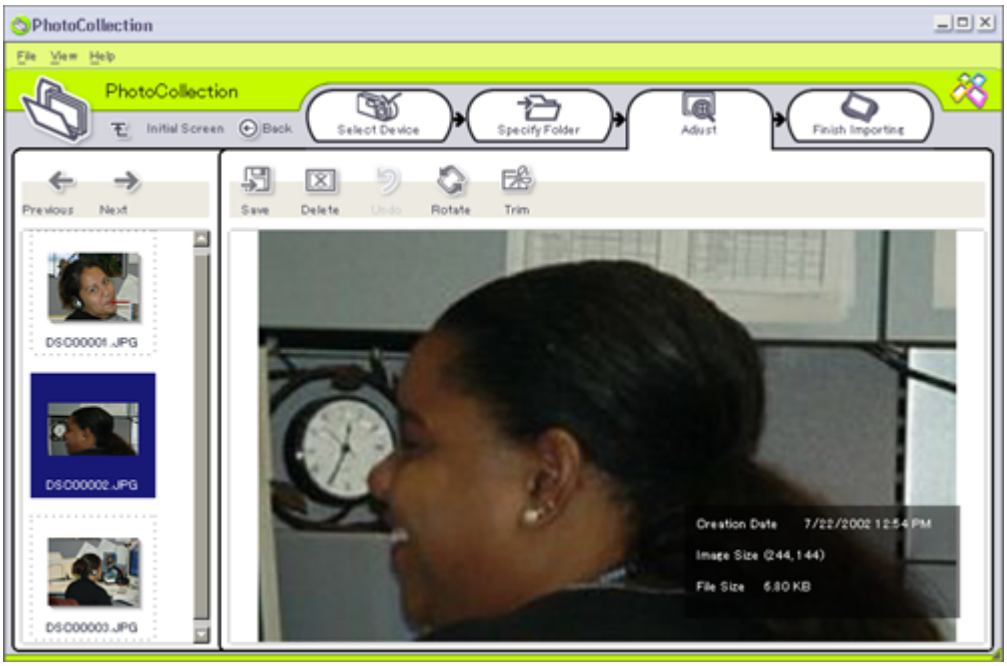
2. Click **List** to view all pictures that are located on the device or media. Make your selections and click **Import Selected Photos**. A **Specify Folder** window appears.

Specify Folder window



3. Select a folder option. If you are importing to a new folder, type in the folder name before clicking **Start Importing**. An **Adjust** window appears.

Adjust window



4. Click to make any desired adjustments to the pictures. The Adjust window displays an enlarged version of the picture on the right and thumbnail versions on the left.

   - **Save** to relocate the individual picture to a new folder.
   - **Delete** to remove the picture from the photo collection.
   - **Rotate** to change the picture's position.
   - **Trim** to crop the picture or capture a specific area.

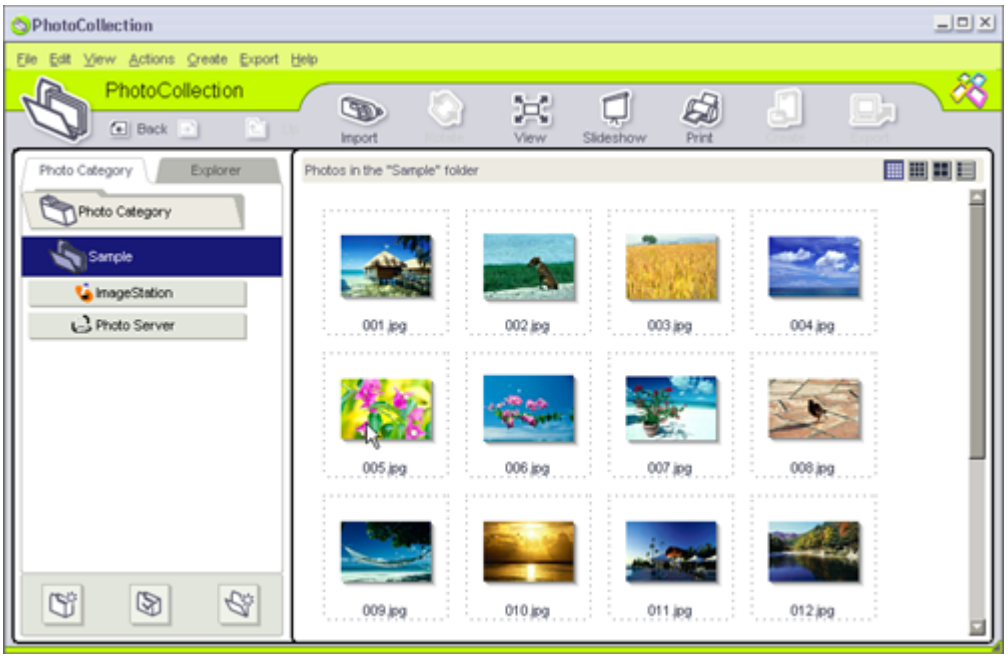
5. Click **Finish Importing** to save the imported pictures in a photo collection.

Using the PhotoCollection feature

You can organize and manage your imported pictures on your computer's hard drive or from your ImageStation℠ account.

1. Click **PhotoCollection**. A list of available photo sources is displayed on the left, with the selected source's contents displayed as thumbnail pictures on the right.

PhotoCollection window



2. From the thumbnail view, click to select pictures. Hold down the **Ctrl** key while clicking, to select several pictures. Use **Ctrl+A** to select all of the photos in a folder.

3. Manage your pictures with these additional tools and features:

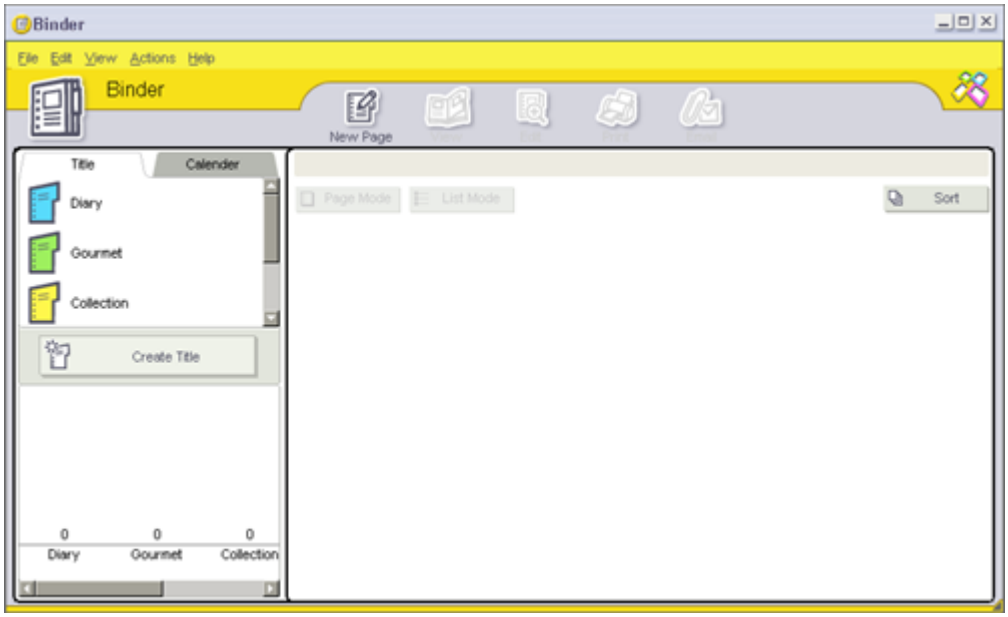
   - **Rotate** to change the picture's position.
   - **View** to enlarge a thumbnail view.
   - **Slideshow** to place the selected pictures into an organized slideshow, customizing the slideshow settings with the icon toolbar at the top of the slideshow screen.
   - **Print** to set up your photos and select paper to make prints.

Using the Binder feature

You can add comments to your favorite photos, add custom backgrounds, clip art, and stamps, or showcase your own drawing talent. Add, remove, or change your designs to create your own unique photo art.

1. Click **Binder**. A list of binder styles is displayed on the left. When you add your pictures to a binder, they are displayed as thumbnails on the right.

Binder window



You can create your own custom binder styles by clicking **Create Title**.

2. Select a binder style, then click **New Page**. Available photo sources are displayed as thumbnails.
3. Click to select a photo. An information form appears.
4. Fill in your information and click **OK**. An art palette window appears.

   To create an original page with art or stamps, use the decoration features on the right by clicking on the desired feature and applying it to your photo.

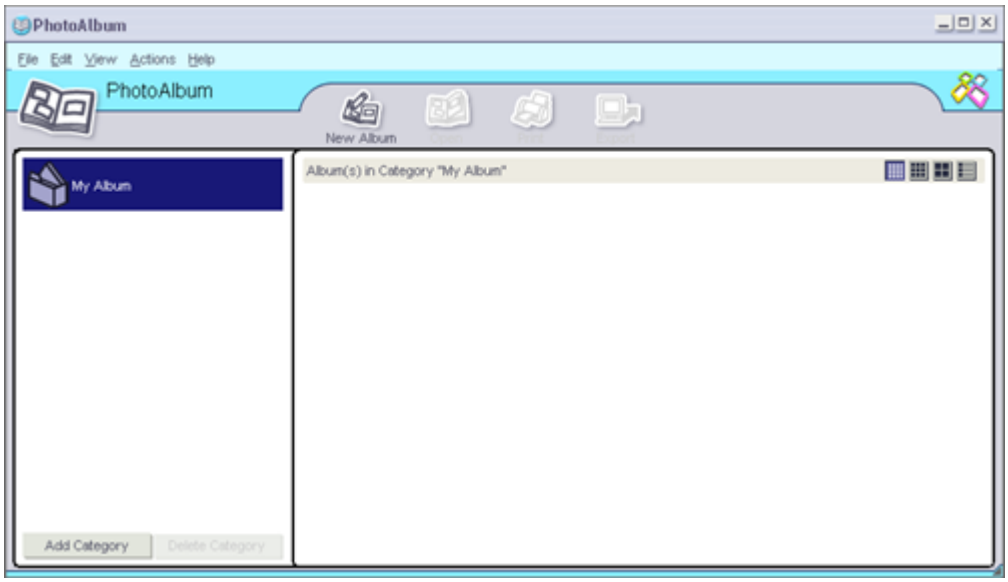
5. Click **Save** to add the new page to your binder.

Using the PhotoAlbum feature

Organize your memorable photos in an electronic photo album. You can share your custom photo albums with friends and family.

1. Click **PhotoAlbum**.

PhotoAlbum window

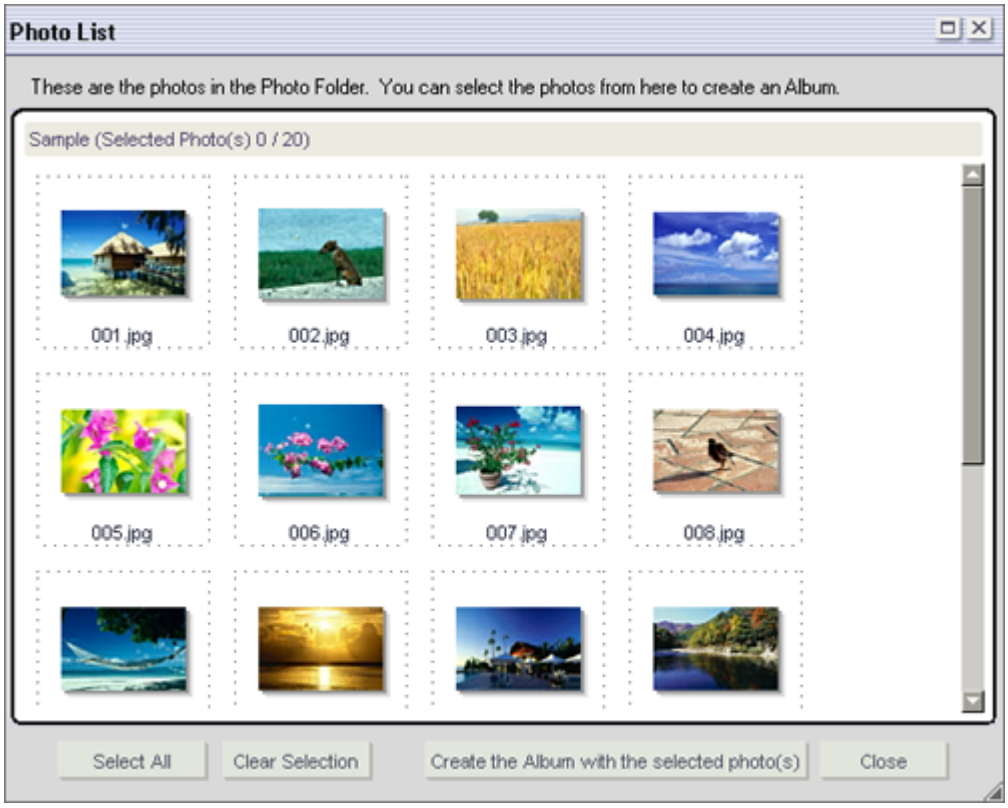


2. Click **New Album**. The Select Photo area appears.

If you want to work on a previously created album, do not click **Create New Album**. Instead, select the desired album from the Album Collection view on the right side of the window.

3. To select the photos you want to include in your album from available folders, click **List**. The **Photo List** window appears.

Photo List window

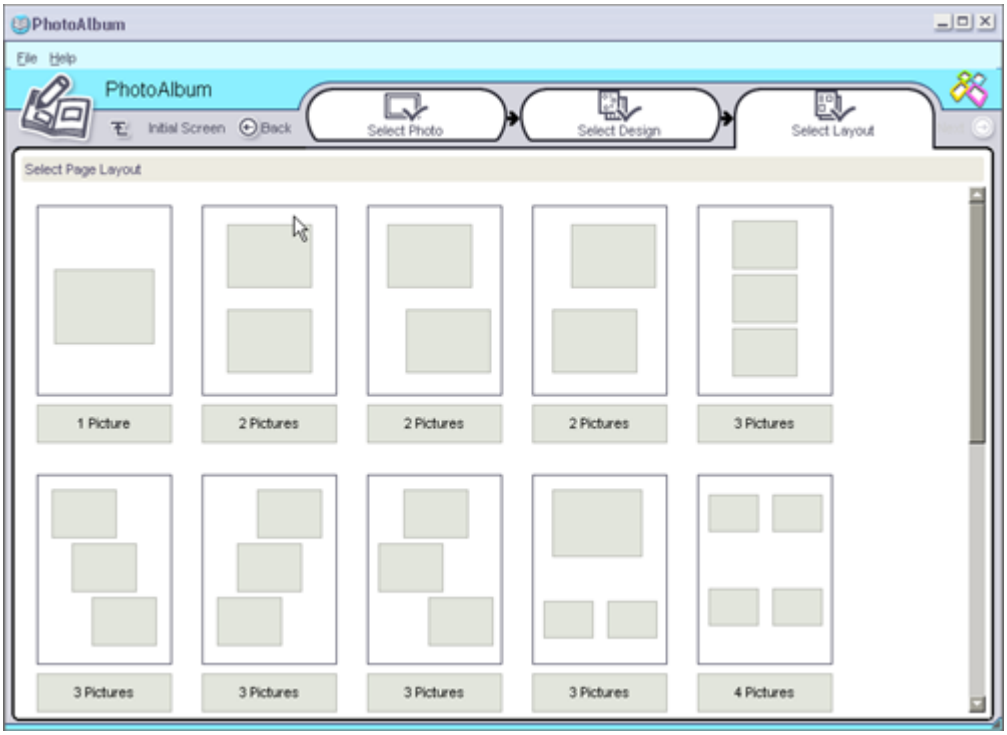


4. Click **Create the Album with the selected photo(s)** after making your picture selection(s). A **Select Design** window appears.

Select Design window

5. Click to select a design layout for your album. Use the scroll bar to view all available album designs. A **Select Layout** window appears.

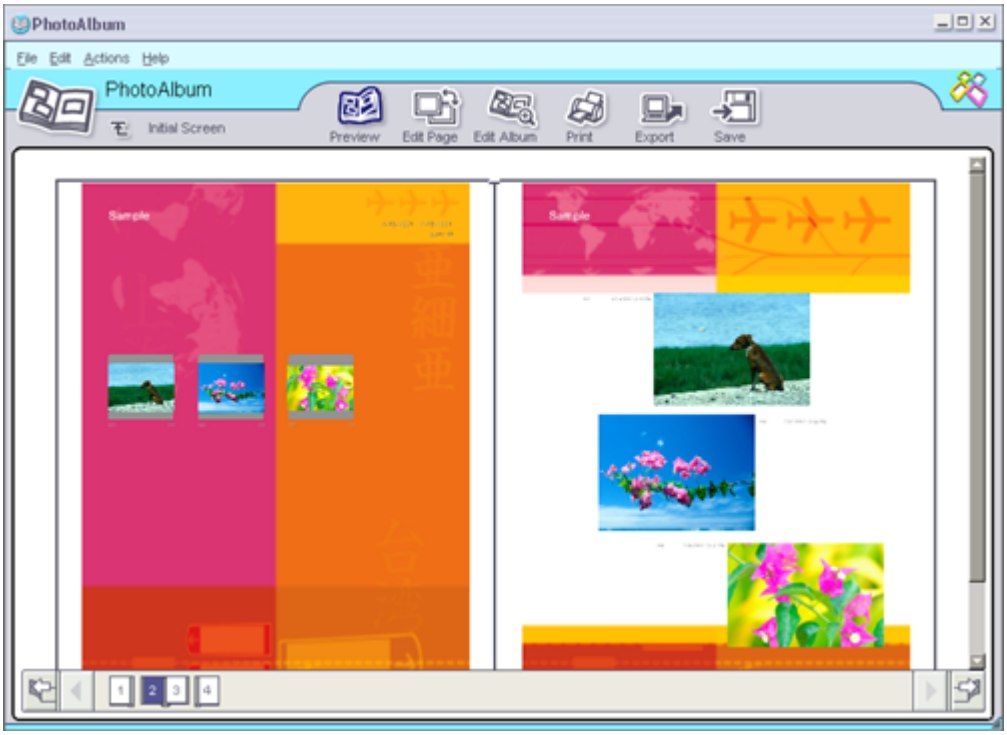
Select Layout window



6. Click to select a page layout for your album. Use the scroll bar to view all available layout designs. A preview of your selected design and page layout is displayed.

   Scroll through your album using the book icons at the bottom of the window.

Album preview window



7. Click **Edit Album** to make changes to your album. Customize your album by adding more pictures, pages, decorations, or comments, or by deleting pages.

   Click **Edit Page** to customize a page in your album. You can customize with your own drawing, stamps or other decorations.

8. Click **Save**. The Save Album dialog box appears.

9. Enter a name for your album and click **OK**.

Photo albums can only be viewed or edited using PictureGear Studio software. To share a PictureGear Studio creation over the Internet or by using another computer, use the Export feature.

To export a photo album

There are three export formats available:

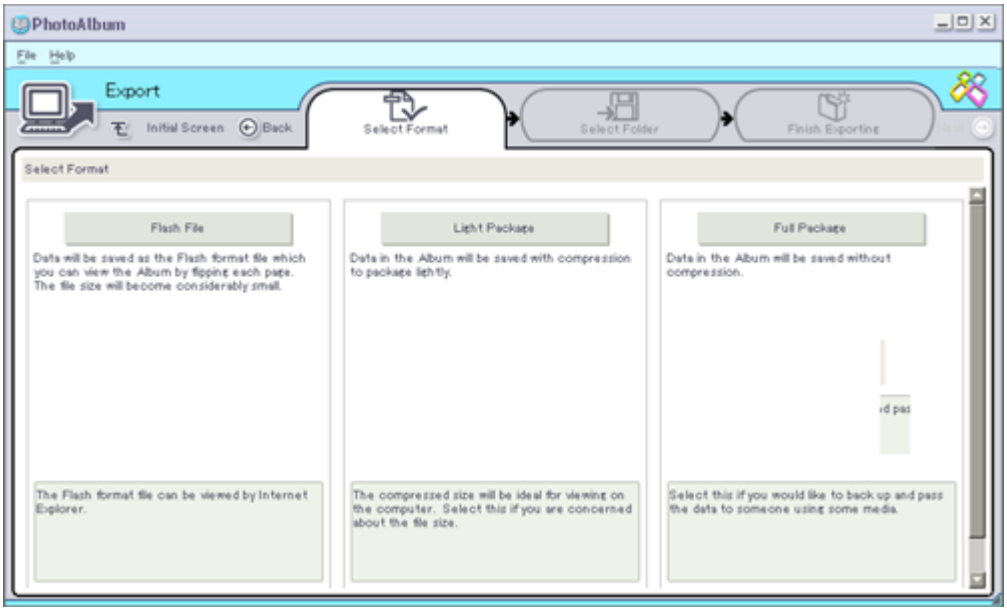
- Export as a **Flash File** to create a small file that can be viewed using Microsoft® Internet Explorer.
- Export as a **Light Package** to create a compressed file that can be viewed on a computer.
- Export as a **Full Package** to create an uncompressed file to be saved to recordable media, such as a CD-R/CD-RW or Memory Stick® media.

Export your completed photo album to enable viewing over the Internet, with another computer, or saving to a recordable media.

1. Create a photo album, as described in Using the PhotoAlbum feature.

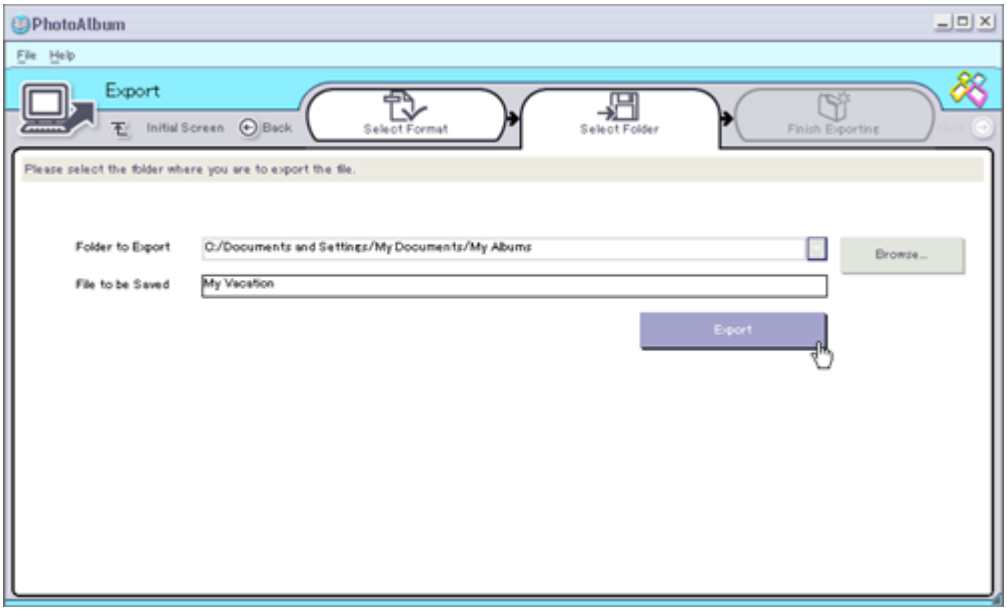
2. Click Export. A **Select Format** window appears.

Select Format window


PhotoAlbum
File Help
Export
Initial Screen
Back
Select Format
Select Folder
Finish Exporting
Select Format
Flash File
Data will be saved as the Flash format file which you can view the Album by flipping each page. The file size will become considerably small.
Light Package
Data in the Album will be saved with compression to package lightly.
Full Package
Data in the Album will be saved without compression.
The Flash format file can be viewed by Internet Explorer.
The compressed size will be ideal for viewing on the computer. Select this if you are concerned about the file size.
Select this if you would like to back up and pass the data to someone using some media.

3. Click to select an export format. A **Select Folder** window appears.

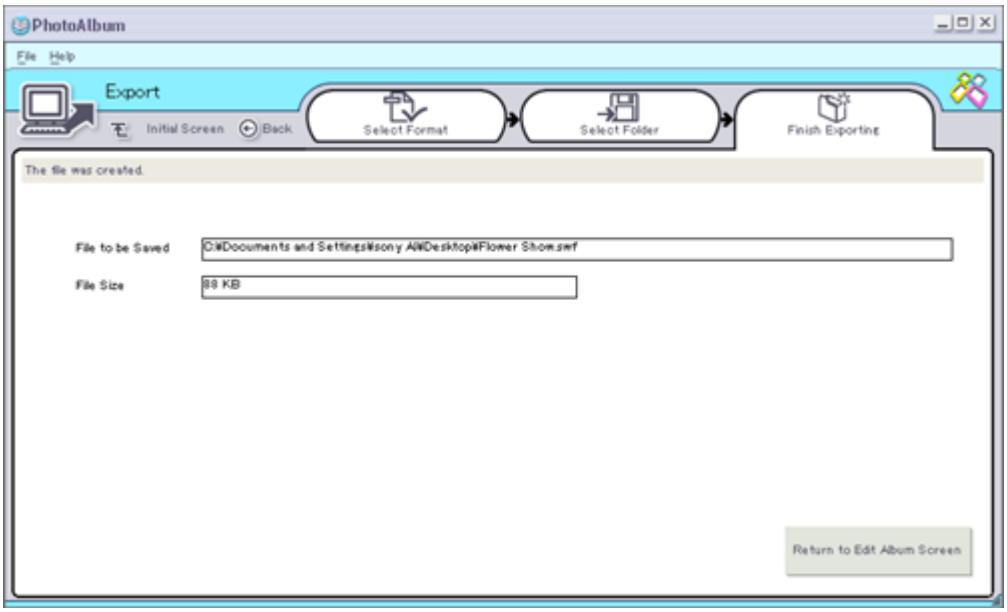
Select Folder window



4. Click **Browse** and navigate to the destination folder. Enter a file name, if desired.

5. Click **Export**. A progress window appears briefly.

Finish Exporting window



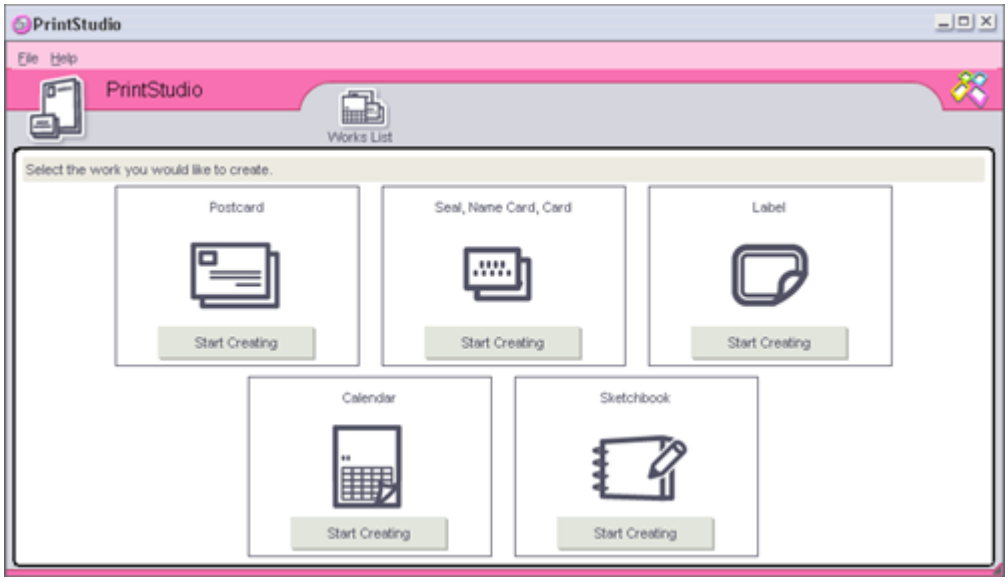
6. An export completion message window appears, displaying the file name and file size. Click **Return to Edit Album Screen**.

Using the PrintStudio feature

Use PrintStudio to design original postcards, calendars, art, and labels using your favorite pictures.

1. Click **PrintStudio**. The PrintStudio window appears.

PrintStudio window



2. Select the item you want to create and click **Start Creating**. The initial creation window appears.

   The initial window varies, depending on the item you are creating.

3. Make selections for the picture(s), design layout, and custom decoration for the item you wish to create.
4. Set the number of copies to be printed and select a connected printer. Click **Print**.

Use the appropriate paper when creating items, such as postcards, labels or business cards.

SonicStage Software

SonicStage software is a new jukebox application that enables you to play and record from audio CDs and import digital audio files while maintaining copyright information. Taking advantage of Sony's copyright-protected ATRAC3 and ATRAC3plus format for high-quality digital audio storage, SonicStage software sports a music visualizer, a sleek player skin design, audio CD burning capability, and a parametric equalizer for fine-tuning audio playback.

Electronic Music Distribution (EMD) Services

EMD enables you to download music files via the Internet. To use Internet services that are compatible with the SonicStage software, you need:

- Access to the Internet from your computer. Sign up with an Internet Service Provider (ISP) and configure your computer for Internet access before using EMD services.

- An EMD service provider. Consult the provider for service information.

Starting SonicStage Software

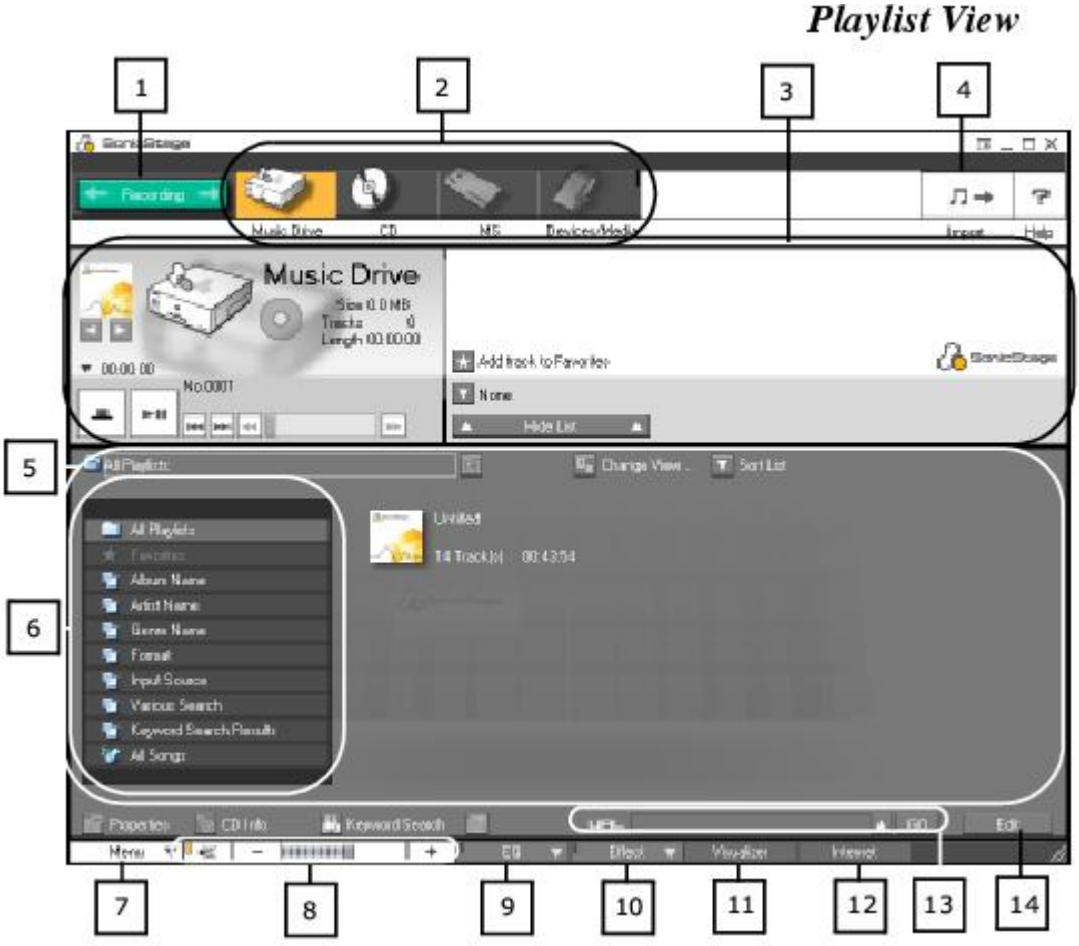
1. Click **Start** on the Windows taskbar, and click **All Programs**.
2. Point to **SonicStage**, and click **SonicStage**.
3. When you have registered with CDDB, the **Confirm the setup of SonicStage**... dialog box appears.
4. Click **Yes** to continue.

The CDDB® (Compact Disc Database) Music Recognition Service registration wizard enables you to register with CDDB. You need Internet access from your computer to register and use this service. For more information regarding CDDB registration, click the **Help** button.

SonicStage source icons (Main window)

- **Music Drive** — View the audio files stored in the music database or registered to a Playlist.
- **CD** — View the contents of the audio CD or CD-R. Enables you to record audio files to the hard disk drive.
- **MS** — View the audio files stored on the MagicGate Memory Stick media, if one is inserted in the Memory Stick slot.
- **Devices/Media** — View the status of your audio files, connected external device, or inserted media.

SonicStage Main Window



1 Recording Assistant button

Displays the Recording Assistant window, where you can record or transfer audio files.

8 Volume Control buttons

Controls the volume for playing audio files.

2 Source icons

Changes the window according to the selected feature.

9 Equalizer button

Displays the Equalizer dialog box where you can adjust the sound quality and register new settings.

3 Playback Area (Playlist view)

Contains different functions depending on the source icon you select. The Player control buttons, which enable you to play, pause, stop, fast forward, and reverse, are located in this area.

10 Sound Effect button

Displays the menu where you can adjust the Vocal Canceller settings.

4 Import button

Displays the Import window, where you can import audio files from the hard disk drive to the Music Drive.

11 Visualizer button

Displays or hides the Visualizer window where you can view images synchronized to the audio file's sound.

5 **Content Area (Playlist view)**

Displays the playlists that are contained within the Categorized List you selected. Double-click a playlist to view its tracks.

12 Internet button

Displays or hides the Internet window where you can download or stream audio files via EMD services.

6 **Categorized List (Tree view)**

Displays the playlists stored in the Music Drive by artist name, genre, format, and so on, and enables you to locate your audio files.

13 Internet address drop-down list (Playlist view)

Displays Internet addresses associated with the currently selected song. You can create a URL for either the album or individual tracks. Click **GO** to immediately connect to the Internet address displayed in the drop-down list.

7 **Menu button**

Displays the SonicStage main menu.

14 Switch to Edit Area button

Switches the Content Area to the Edit Area.

Recording from a CD

You can record songs from audio CDs and add them to playlists in SonicStage software.

When you record from an audio CD from your optical drive for the first time, the **CD Drive Optimization** dialog box appears. Click **Start** to verify your optical drive. After the verification is performed, recording begins.

To record from a CD

1. Insert an audio CD into your computer's optical drive. The Microsoft Windows® system recognizes the CD, and a window may appear asking you to select an action. Click **Cancel** to close this window.

   When SonicStage software is running and an audio CD is inserted, an Internet connection to CDDB is automatically launched to retrieve artist and track information. An error message is displayed if there is no Internet connection. Follow these steps to disable this function:

   1. Click **Menu**.
   2. Select **CD Settings**.
   3. Clear the **Start playing the CD automatically** check box.

2. Open SonicStage software using the Start menu. See Starting SonicStage Software for more information.
3. When the Main Window appears, click

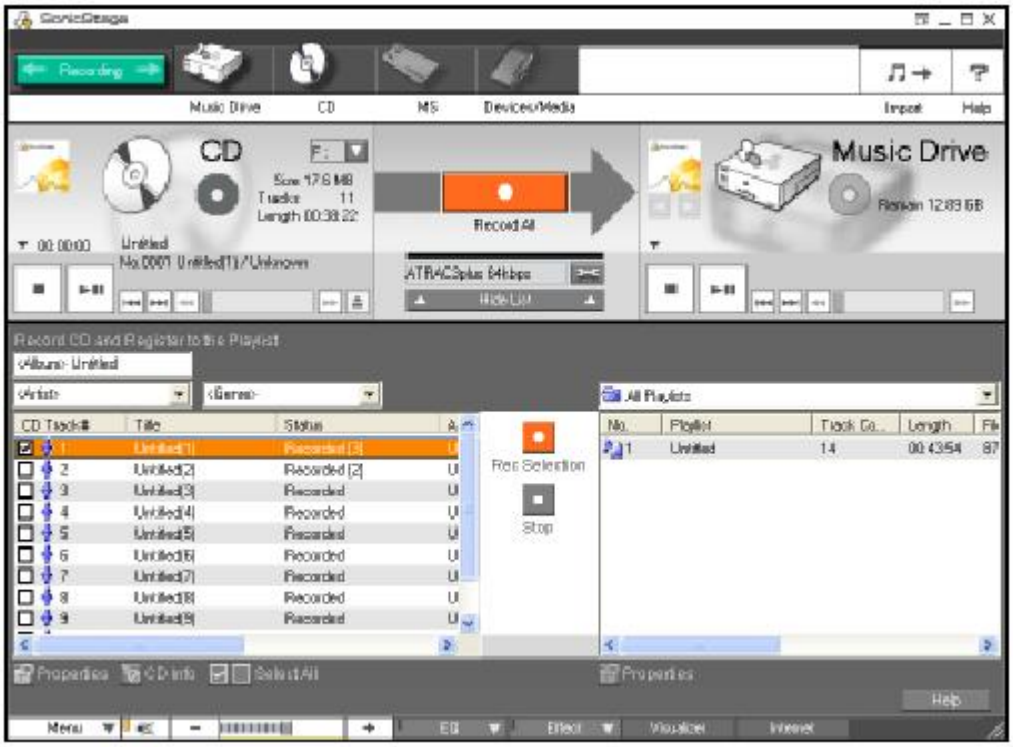
. The **Recording Assistant Window** appears.
4. Select the **CD icon** in the Source box, and then select the **Music Drive icon** in the Target box.
5. Click the **Jump to Record Window** button. The **Record Window** appears.

   You can also drag and drop the CD icon onto the Music Drive icon in the Main Window to open the Record Window.

6. Click

to view the List Area of the Record Window. To select specific files on your CD, click to check or clear the check marks of the tracks on the CD. A check mark indicates you have selected that track for recording.

Record Window



You can also select or clear the check marks of all the tracks on the CD by clicking one of the **Select All** buttons.

or .

7. Click the **CD Info** icon in the lower left corner of the Record Window to launch CDDB and name your CD and its song titles.

   The CDDB® (Compact Disc Database) Music Recognition Service registration wizard enables you to register with CDDB. You need Internet access from your computer to register and use this service. For more information regarding CDDB registration, click the **Help** button.

   The CD Info button feature is not supported for all audio CDs.

8. Click (**Change CD Recording Format)** on the Record Window to select a different recording format and bit rate. See the online SonicStage Help guide for more information.

9. You have two options for recording the audio tracks on a CD:

   1. Click the **Record All** button to record all the tracks on a CD.

   2. Click the **Rec Selection** button to record the specific tracks you checked in the List Area.

10. When the Select Playlist window appears, select either **Create a New Playlist** or **Add to Playlist**, and click the **Start Rec** button. When the recording is finished, the playlist appears in the Playlist window.

Transferring songs (Check-In/Check-Out)

You can use SonicStage software to transfer audio files between the playlists stored in the Music Drive and the external devices or media. Transferring files from the Music Drive to the external device or media is called "check-out," and transferring files from the external device or media to the Music Drive is called "check-in."

✍ See the instructions supplied with the external device or media for more information on how to use it.

The following instructions explain how to check in and check out audio files from the Music Drive to a USB device, a MiniDisc, or a MagicGate Memory Stick® media. For instructions on automatically checking in and out audio files, see the online SonicStage Help guide.

To check-out songs

1. Connect the external device or insert the media into your computer.
2. Open SonicStage software using the Start menu. See Starting SonicStage Software for more information.
3. When the Main Window appears, click

. Your computer automatically recognizes the connected external device or media and the **Check-In/Out Window** appears.
4. Click

to view the List Area of the Check-In/Out Window.

Check-In/Out Window

5. Select the playlist that contains the track that you want to check out. The tracks in the playlist are shown in the Playlist view panel. Click the track to select it.

   ✍ You can also hold down the **Ctrl** key while you click the tracks to select more than one at a time.

6. Click (**Change Transfer Mode**). A Setup in transfer mode dialog box appears containing transfer information relevant to the installed device or media. See the online SonicStage Help guide for more information on how to select a transfer mode for a particular device.
7. Click (**Check-Out**), or drag and drop the file onto the external device or media song list to begin the check-out process.

   ✍ To cancel check-out, click

, or click (**Stop**), which is located in the middle of the Check-In/Out Window.

To check-in songs

✍ The songs that you transfer to external devices or media can only be checked in to the Music Drive (or hard drive) of the same computer from which the songs were checked out.

1. Connect the external device or insert the media into your computer. Your computer automatically recognizes the connected external device or media and the **Check-In/Out Window** appears.

2. Click

to view the List Area of the Check-In/Out Window.

3. Select a track from the song list of the external device or media. To check in more than one track at a time, hold down the **Ctrl** key and click the additional songs.

4. Click (**Check-In**), or drag and drop the track(s) onto the Playlist view panel to begin the check-in process. If you want to check in all of the tracks in the external device or media, click the **Check-In All** button.

✍ To cancel check-in, click

, or click (**Stop**), which is located in the middle of the Check-In/Out Window.

See the online SonicStage Help guide for more information about using SonicStage software.

To access the online help guide

1. Click **Start** on the Windows taskbar, and click **All Programs**.

2. Point to **SonicStage**, and click **SonicStage Help**.

Additional features

- **SonicStage Backup Tool —** You can back up and restore music, graphics, and information data managed by SonicStage software. You must be connected to the Internet to use the SonicStage Backup Tool.

- **Import audio files in various formats —** You can import audio files in various formats, such as the ATRAC3 , ATRAC3plus, MP3, or WAV standards. You can also import audio files that comply with the Microsoft® Windows Media Technologies (WMT) standard, identified by .asf or .wma extensions. Manage your audio files through the Playlist feature of SonicStage software.

- **Manage imported songs on the playlist —** Additional features are available when you register your imported songs through the Playlist feature of the SonicStage software. You can manage your music by creating your own list of songs categorized by genre or artist, displaying your song list in the Playlist feature, and arranging your songs in a customized order using the Playlist folders. Edit your music by combining multiple songs into a single song, or divide one song into two, by using the Combine and Divide features.

- **Simple mode —** The main SonicStage window viewed in Simple mode, is a smaller, compact version of Full mode. This may be convenient when you want to listen to music with SonicStage software, while using other applications, or whenever you feel the Full mode view is intrusive. The design of the main SonicStage window in simple mode can be changed by selecting a new "skin," which enhances the window's appearance. The Simple mode feature enables you to perform playback operations only.

Additional Software Information

VAIO Edit Components Software

VAIO Edit Components is a software plug-in for Adobe® Premiere® software that provides maximum compatibility and video quality for capturing video from your Sony digital camcorder. If your VAIO® computer did not have Adobe® Premiere® software preinstalled and you subsequently purchase and install Adobe® Premiere® software, install this software to ensure maximum compatibility with Sony digital camcorders.

To install VAIO Edit Components

1. Insert your Application Recovery CD #2 into your optical drive.
2. Click **Start**, click **My Computer**, and click your optical drive.
3. Click **Support**, and click **VEC**.
4. Double-click **Setup**.

   The VAIO Edit Components installation wizard starts.
5. Follow the on-screen instructions in the installation wizard to complete the installation.
6. Restart your computer when prompted to do so.

Legal Information

SONY ELECTRONICS INC. PROVIDES NO WARRANTY WITH REGARD TO THIS MANUAL, THE SOFTWARE, OR OTHER INFORMATION CONTAINED HEREIN AND HEREBY EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE WITH REGARD TO THIS MANUAL, THE SOFTWARE, OR SUCH OTHER INFORMATION. IN NO EVENT SHALL SONY ELECTRONICS INC. BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES, WHETHER BASED ON TORT, CONTRACT, OR OTHERWISE, ARISING OUT OF OR IN CONNECTION WITH THIS MANUAL, THE SOFTWARE, OR OTHER INFORMATION CONTAINED HEREIN OR THE USE THEREOF.

Sony Electronics Inc. reserves the right to make any modification to this manual or the information contained herein at any time without notice. The software described herein is governed by the terms of a separate user license agreement.

This product contains software owned by Sony and licensed by third parties. Use of such software is subject to the terms and conditions of license agreements enclosed with this product. Some of the software may not be transported or used outside the United States. Software specifications are subject to change without notice and may not necessarily be identical to current retail versions.

Updates and additions to software may require an additional charge. Subscriptions to online service providers may require a fee and credit card information.

Certain software product(s) included with this computer may include features such as copy protection and content management technology.

USE OF THE SOFTWARE PRODUCT(S) REQUIRES AGREEMENT TO APPLICABLE END USER AGREEMENTS AND FULL COMPLIANCE WITH APPLICABLE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and privacy policies will be detailed during initial launch of the software product(s), or upon certain reinstallations of the software product(s) or reconfigurations of the computer, and may be completed by Internet or telephone (toll charges may apply).

© 2002 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, DVgate, Handycam, MovieShaker, i.LINK, ImageStation, Net MD, Network Walkman, MagicGate, Memory Stick, MICROMV, OpenMG, SonicStage, Giga Pocket, Click to DVD, PictureGear, and ATRAC3 are trademarks or service marks of Sony. Microsoft, Windows, and Windows Media are trademarks or registered trademarks of the Microsoft Corporation.

All other trademarks are trademarks or registered trademarks of their respective owners.

Memory Upgrades

- Upgrading Your Computer's Memory

Upgrading Your Computer's Memory

Before you begin upgrading your computer's memory, make sure you read Precautions and procedures. See the Welcome page to view the VAIO® Computer Specifications for the type of module and amount of memory installed on your computer. Also see Typical expansion memory configuration. Expansion memory modules are available as options. For memory upgrades and information about which memory modules to use, refer to your VAIO® Computer Specifications.

- Precautions and procedures
- Typical expansion memory configuration
- Removing and installing memory modules
- Confirming added memory capacity

Precautions and procedures

The procedures described below assume familiarity with the general terminology associated with personal computers and with the safety practices and regulatory compliance required for using and modifying electronic equipment.

Sony recommends that memory upgrades be performed by an authorized Sony Service Center. To find the nearest center or agent, go to: http://www.sony.com/pcsupport.

When installing a memory module in your computer, make sure you read the proper safety precautions below. Mistakes that occur when installing or removing a memory module may cause a malfunction.

- Disconnect the computer from its power source and from any telecommunications links, networks, or modems before you install or remove a memory module. Failure to do so may result in personal injury or equipment damage.
- Electrostatic discharge (ESD) can damage disk drives and other components. Perform the procedures described below only at an ESD workstation. If such a station is not available, do not work in a carpeted area, and do not handle materials that produce or hold static electricity (cellophane wrappers, for example). Ground yourself by maintaining contact with an unpainted metal portion of the chassis while performing the procedure.
- Do not open the memory module package until you are ready to install the module. The package protects the module from ESD.
- Use the special protective package to store a memory module and prevent ESD, or wrap the memory module in aluminum foil.

Typical expansion memory configuration

Total System Memory (MB)	On board (MB)	Slot (MB)
128	128	0
256	128	128

Removing and installing memory modules

Make sure you read Precautions and procedures before you remove or install a memory module. When installing a memory module, do not open the module package until you are ready to install it. The package protects the module from Electrostatic discharge (ESD).

To remove a memory module

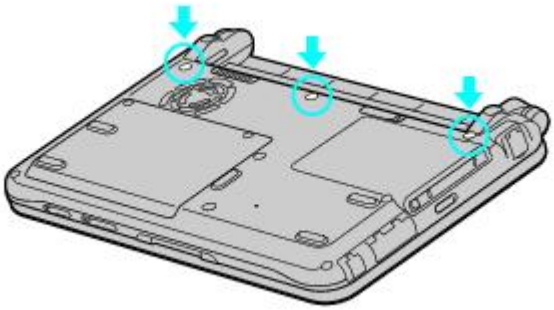
1. Shut down the computer and all peripheral devices.
2. Disconnect the power cord, all cables, and remove the battery if it is installed. See To remove a battery.
3. Wait for the computer to cool down.

   The interior of the computer becomes extremely hot during operation. Wait at least one hour for the computer to cool down before you remove the screws.

4. Use an appropriate screwdriver to loosen and remove the screws on the bottom of the computer.

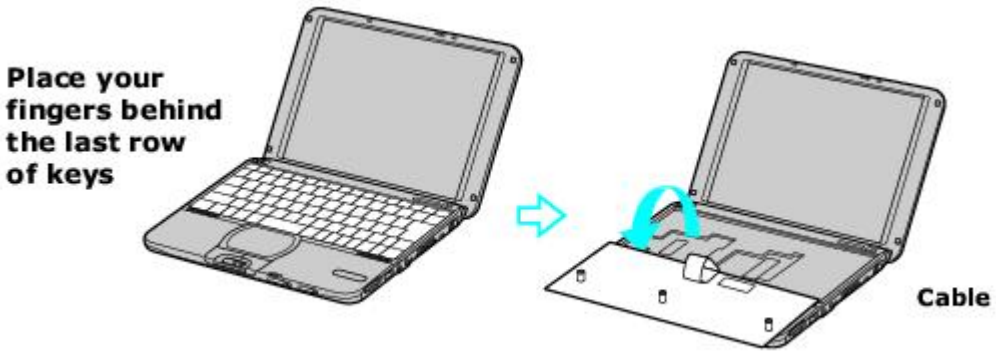
   To avoid damaging the computer, do not remove or loosen any other screws.

Removing the Bottom Screws



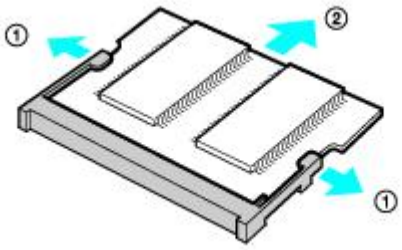
5. Turn the computer over so you are looking at the keyboard, and place your fingers behind the last row of keys.
6. Gently lift the keyboard up and turn it over the touch pad. Do not detach the cable when lifting the keyboard.

Lifting the Keyboard



7. Touch a metal object (such as the connector panel on the back of your computer) to discharge static electricity.
8. Remove the memory module by pulling out the tabs (see arrows No. 1), and pulling out the module in the direction of arrow No. 2. See To install a memory module for information about installing a memory module.

Removing a Memory Module

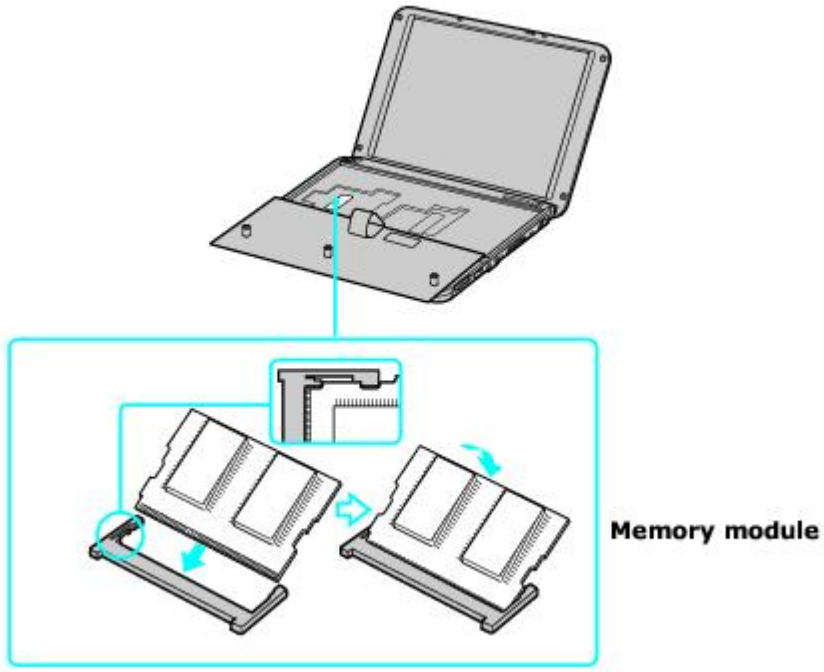


To install a memory module

1. Remove the existing memory module from the computer. See To remove a memory module for more information.
2. Remove the new memory module from its packaging, and install the memory module by sliding it into the open slot at a 45-degree angle.

Do not touch any part of the motherboard or the other components inside the computer.

Installing a New Memory Module



3. Snap the connectors into place when the board is correctly seated, and close the computer cover.
4. Replace the fastening screws on the bottom of the computer.
5. Make sure the system memory matches the amount of installed memory. See Confirming added memory capacity for more information.

Confirming added memory capacity

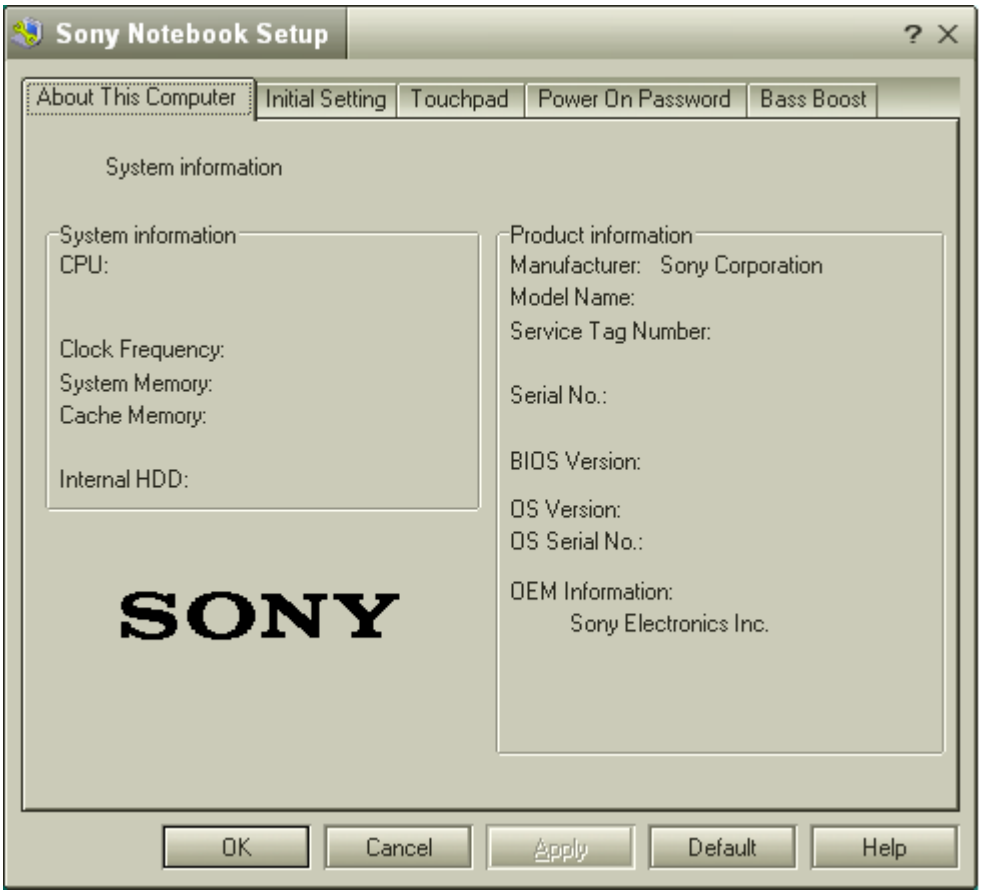
After you've installed a new memory module, make sure the operating system's memory corresponds with the memory upgrade.

To check your system's memory

1. Turn on the computer.
2. Click **Start** on the Windows® taskbar, point to **Programs**, and then point to **Sony Notebook Setup**.
3. Select **Sony Notebook Setup** from the submenu. The **Sony Notebook Setup** dialog box appears.
4. Click the **About This Computer** tab if it is not already open. Make sure the **System Memory** displayed in the left panel matches the amount of memory installed.

The displayed memory may be less than the installed memory due to the amount used by the display adapter.

Sony Notebook Setup Dialog Box



Using the Recovery CDs

- Application and System Recovery CDs
- Using Your Recovery CDs

Application and System Recovery CDs

Your computer comes with the following Application Recovery and System Recovery CDs. You will need an optical drive to use these recovery CDs. If your computer does not come with an optical drive, use an external optical drive.

Application Recovery CD(s)

Sony Electronics Inc.

This CD enables you to reinstall individual software programs and device drivers if they become corrupted or are erased.

System Recovery CD(s)

Sony Electronics Inc.

This CD enables you to restore the operating system and software that shipped with your computer if they become corrupted or are erased. This CD restores your computer to its original factory settings, so user data and software programs installed since you started using your computer will be lost.

Using Your Recovery CDs

The following sections describe how to use the Application Recovery and System Recovery utilities.

- Using the Application Recovery CD(s)
- Using the System Recovery CD(s)

Using the Application Recovery CD(s)

The Application Recovery CD(s) utility enables you to reinstall individual software programs, device drivers, and repair software programs if they become corrupted or are erased. Reinstalling an individual program or device driver may correct a problem you are experiencing with your computer, peripheral hardware, or software. You may not need to reinstall the entire contents of your hard disk. To reinstall all the software titles that shipped with your computer, use the System Recovery CD(s). See Using the System Recovery CD(s) for more information.

✍ You must be using a Windows® operating system to run the Application Recovery CD utility.

To reinstall programs with the Application Recovery CD(s)

1. Turn on your computer. If your computer is already on, close all open programs.
2. When the Windows® desktop appears, insert Sony Application Recovery CD No. 1 into your computer's optical drive. The Application Recovery utility loads automatically.
3. Click **OK** in the VAIO welcome window. The **Sony Application Recovery Program** window appears.
4. Double-click the **Software** folder icon.
5. Select the icon for the application you want to restore, and then follow the on-screen instructions to complete the recovery process.

✍ Your system may include one or more Application Recovery CDs. If you have more than one Application Recovery CD, insert the first CD to run the Application Recovery program. You may be prompted to insert the next CD, depending on the application you wish to restore.

To reinstall device drivers with the Application Recovery CD(s)

1. Click **Start** on the Windows® taskbar, and right-click **My Computer**.
2. Click **Properties**. The **System Properties** dialog box appears.
3. Click the **Hardware** tab, and click **Device Manager**.
4. Right-click the unknown device or the device that requires the driver installation, and click **Update Driver** from the shortcut menu.

   ✍ The unknown devices(s) is identified by a yellow question mark or exclamation point.
5. In the Hardware Update Wizard, click to select **Install from a list or specific location (Advanced)**.
6. Click **Next**.
7. Click to cancel the **Search removable media (floppy, CD-ROM...)** option.
8. Click to select **Include this location in the search**.
9. Insert Application Recovery CD No. 1 into the optical drive.
10. Click **Browse**. The **Browse For Folder** dialog box appears.
11. Click to open the **ARCD** folder, and then open the drivers folder.
12. Click the folder name of the device in which you want to reinstall, and click **OK**. The **Hardware Update Wizard** appears.
13. Click **Next**.
14. Select the driver location that you selected in Step 12, and click **Next**. The Microsoft® Windows® operating system automatically reinstalls the device driver(s) from the Application Recovery CD.
15. Click **Finish**, and remove the Application Recovery CD from the optical drive.
16. Turn off your computer by clicking **Start**, and then **Turn off computer**.

17. Wait 30 seconds, and turn on your computer.

If you have any questions about using the Application Recovery CD(s), visit http://www.sony.com/pcsupport, or contact Sony Customer Support at 1-888-4-SONY-PC.

Using the System Recovery CD(s)

The System Recovery CD(s) enables you to format your hard disk and restores all original software programs. Your computer is returned to the original factory settings.

The System Recovery process removes all software that you may have installed since you started using your computer. Reinstall any software programs that were not included with the computer when you purchased it.

You can use the System Recovery CD(s) to reinstall the operating system and software titles that shipped with your computer if they become corrupted or are erased. You may not need to reinstall the entire contents of your hard drive. If you experience a problem with your computer, reinstalling an individual device driver or software title may correct the problem. Use the Application Recovery CD(s) to reinstall individual programs and to reinstall device drivers. See Using the Application Recovery CD(s) for more information.

The System Recovery CD(s) contains a backup copy of all the software originally installed on your hard disk. It can be used only to recover the hard disk of the computer you purchased.

System Recovery options

- **Default System Drive Recovery** — All data on Drive C is deleted. The factory default settings and software programs are restored on this drive only.
- **Change Partition Size** — All partitions, custom installations, and changes are removed from the hard drive. You can set the partition sizes for both the Drive C and Drive D. The original, preinstalled operating system and software programs are restored.
- **Recovery to Original Factory Defaults** — All data and partitions are removed from the hard drive. All original factory settings, operating system, and preinstalled software are restored.

The System Recovery utility does not back up your system's data. If you wish to retain your system data, perform a backup to an external media.

To use the System Recovery CD(s)

Your system may take a few minutes to load necessary files. A blue screen may appear during the downloading process.

1. Insert the Sony System Recovery CD in the optical drive. The first CD must be in the drive before you restart your computer.
2. Turn off your computer by clicking **Start**, and then **Turn off computer**.
3. Wait 30 seconds, and turn on your computer. The System Recovery utility restarts from the optical drive.
4. When the **VAIO System Recovery Utility** wizard appears, click **Next**.
5. Follow the on-screen instructions to complete the recovery process.

If your computer does not start from the Recovery CD

1. Press the power button and hold it for more than four seconds to turn off the computer.
2. Turn on the computer. When the Sony logo is displayed, press the **F2** key. The **BIOS Setup Utility** appears.
3. Press the right arrow key → to select the **Exit** menu.
4. Press the down arrow key ↓ to select **Get Default Values**, and press **Enter**. The **Setup Confirmation** window appears.
5. Press **Enter** again to select **Yes**.
6. Make sure **Exit (Save Changes)** is selected, and then press **Enter**. The **Setup Confirmation** window appears again.
7. Make sure **Yes** is selected, and press **Enter**. The computer restarts from the Recovery CD.

Your system may include one or more System Recovery CDs. If you have more than one System Recovery CDs, insert the first CD to run the System Recovery program. You are prompted to insert the second CD once the information from the first CD has been installed.

The recovery process takes from 30 to 60 minutes to complete.

After recovering your system using the System Recovery CD(s), you may be prompted to insert your Application Recovery CD(s) after restarting the Windows operating system. Insert the Application Recovery CD to automatically complete recovery of your system.

Troubleshooting and Support

This section describes how to solve common problems you may encounter when using your computer. Many problems have simple solutions, so try these suggestions before you contact Sony Computing Support (http://www.sony.com/pcsupport).

- Troubleshooting Your Computer
- Troubleshooting Batteries
- Troubleshooting the Printer
- Troubleshooting the Mouse and Touchpad
- Troubleshooting the Modem
- Troubleshooting Networks
- Troubleshooting DVDs and CDs
- Troubleshooting i.LINK Drives
- Troubleshooting Floppy Disk Drives
- Troubleshooting PC Cards
- Troubleshooting Audio-Video Connections
- Troubleshooting the LCD screen
- Troubleshooting Memory Stick Media
- Troubleshooting Programs
- Computer Support Information

Why doesn't my computer start?

- Make sure the computer is securely plugged into a power source and is on. Make sure the power indicator shows the power is on. See Connecting the AC adapter for more information.
- Make sure the battery is inserted properly and is charged.
- If you are connected to a docking station with a floppy disk drive or an external floppy disk drive, make sure the floppy disk drive is empty.
- If the computer is plugged into a power strip or Uninterruptible Power Supply (UPS), make sure the power strip or UPS is turned on and working.
- If you are using an external display, make sure it is plugged into a power source and turned on. Make sure the brightness and contrast controls are adjusted correctly. See the manual that came with your display for details.
- Remove the battery from the computer, unplug the power cord, and plug it in again. Turn on the power.
- If the power control button does not function, remove the AC adapter and battery. Wait one minute, and reattach them before pressing the power button.
- Condensation may cause the computer to malfunction. If this occurs, do not use the computer for at least one hour.
- Unplug the power cord, press the reset button by using a thin, straight object (such as a paper clip), remove the battery, plug it in again, and turn on the power.

Why does a BIOS error appear when my computer starts?

When the battery is low on power, your system may not start properly, and the message "Press <F1> to resume, <F2> to setup" may appear at the bottom of the screen. Follow these steps:

1. Press **F2**. The **BIOS Setup** menu appears.
2. Set the date (month/day/year). Press **Enter**.
3. Press the **Down Arrow** key ↓ to select **System Time**, and then set the time (hour: minute: second). Press **Enter**.
4. Press the **Right Arrow** key → to select the **Exit** tab, and then press the **Down Arrow** key ↓ to select **Get Default Values**.
5. Press **Enter**. The **Setup Confirmation** window appears.
6. Select **Yes**, and press **Enter**.
7. Select **Exit (Save Changes)**, and press **Enter**. The **Setup Confirmation** window appears again.
8. Select **Yes**, and press **Enter**. The computer restarts.

✍ If this occurs on a regular basis, contact Sony Computing Support (http://www.sony.com/pcsupport).

Why does the message, "Operating system not found" appear when my computer starts, and why won't Windows start?

- If you have connected a docking station with a floppy disk drive or an external floppy disk drive, make sure there is no disk in the floppy disk drive (non-bootable).
- If a non-bootable floppy disk is in the drive, follow these steps:
  1. Turn off the computer, and remove the floppy disk.
  2. Restart the computer and confirm that the Windows® operating system starts properly.
- If Windows still does not start, follow these steps to initialize the BIOS:

1. Remove any floppy disk from the floppy disk drive.
2. Turn off the computer.
3. Remove any peripheral devices connected to the computer.
4. Restart the computer.
5. Press **F2** when the Sony logo appears. The **BIOS Setup** window appears.
6. Press the **Right Arrow** key → to select the **Exit** menu.
7. Press the **Down Arrow** key ↓ to select **Get Default Values**.
8. Press **Enter**. The **Setup Confirmation** window appears.
9. Select **Yes**, and press **Enter**.
10. Select **Exit (Save Changes)**, and press **Enter**. The **Setup Confirmation** window appears again.
11. Select **Yes**, and press **Enter**. The computer restarts.

If your computer continues to display the message "Operating system not found," and Windows does not start, use your supplied System Recovery CD(s) to restore the software titles shipped with your computer. See Using the System Recovery CD(s) for more information.

⚠ **The System Recovery CD restores your computer to its original state, so user data and programss will be lost.**

Why doesn't my computer respond or shut down?

It is best to shut down your computer using the Shut Down command on the Windows Start menu. Using other methods, including those listed below, may result in loss of unsaved data.

- Click **Start** on the Windows® taskbar, and select **Shut Down**. When the **Shut Down Windows** dialog box appears, select **Shut Down**, and click **OK**.
- If your computer does not turn off, press **Ctrl**+**Alt**+**Delete** simultaneously. The **Windows Security** dialog box appears, and you can turn off the computer from the **Shut Down** menu.
- If your computer still does not turn off, press and hold the power button to turn off the computer.
- Unplug the computer from the AC adapter, and remove the battery from your computer.
- If your computer stops responding while playing a CD or DVD, press **Ctrl**+**Alt**+**Delete** simultaneously. The **Windows Security** dialog box appears, and you can turn off the computer from the **Shut Down** menu.

✍ Pressing **Ctrl**+**Alt**+**Delete** simultaneously or shutting down the computer with the power button may result in data loss in files that are currently open.

Why won't the power management respond?

Your computer's operating system may become unstable if a lower power state, such as Hibernate, is initiated and changed before the computer completely enters the lower power state.

To restore the computer to its normal operating stability

1. Close all open programs.
2. Restart the computer by pressing **Ctrl**+**Alt**+**Delete** simultaneously. The **Windows Security** dialog box appears, and you can turn off the computer from the **Shut Down** menu.
3. If this procedure does not work, press and hold the power button to turn off the computer.

Why is the sound of my computer's fan so loud?

Use the PowerPanel utility to change the Thermal Control Strategy setting to Quiet. This setting slows down the CPU speed. See PowerPanel Help for more information.

To reduce fan noise

1. Right-click the **Battery** icon on the taskbar, and select **Edit/Create Profiles**. The **Profile Editor** window appears.
2. Double-click **System** to open the file if it isn't already opened.
3. Double-click **Thermal Control Strategy - Performance**, and select **Quiet**.
4. Restart your computer.

Why does the System Properties dialog box display a slower CPU speed than advertised?

This is normal. Because your computer's CPU utilizes a type of CPU speed controlling technology for power conservation purposes, System Properties may display the CPU's current speed instead of the maximum speed.

Troubleshooting Batteries

How do I know when the battery is charged?

To determine the remaining battery charge, see Displaying battery information.

When is the computer using AC power?

When the computer is directly connected to the AC adapter, it uses AC power, even if a battery is installed.

When should I recharge the battery?

- When the battery level falls below 10 percent.
- When both the battery and power indicators blink.
- When you have not used the battery for a considerable amount of time.

Can my computer enter Hibernate mode while using battery power?

For some software programs and some peripheral devices, your computer may not enter Hibernate mode when the battery life is low. To avoid loss of data when using battery power, you should save your data frequently and manually activate a power management mode, such as Standby or Hibernate.

When should I replace the battery?

If, after fully charging the battery, the battery power is still low, the battery may be reaching the end of its life and should be replaced.

Why is the battery warm?

While the battery is in use or being discharged, the battery heats up. This is normal and is not a cause for concern.

Troubleshooting the Printer

Why can't I print a document?

- Make sure the printer is on, and the printer cable is securely connected to the ports on your printer and computer. See Connecting a printer for more information.
- Make sure the printer is compatible with the Microsoft® Windows® operating system installed on your computer.
- You may need to install the printer driver software before you use the printer. See the instructions that came with your printer for information about installing these drivers.
- If the printer is not functioning after the computer resumes from a power saving mode (Standby or Hibernate), reset the printer connection.

  1. From the **Start** menu, point to **Settings**, and click **Printers**.
  2. Right-click the icon of the printer that is not functioning, and select **Properties**.
  3. Click **OK**. The printer should now function properly.

Troubleshooting the Mouse and Touchpad

Why doesn't the computer recognize the USB mouse?

- Make sure the mouse is securely plugged into the USB port. See Connecting a mouse or keyboard for more information.
- You may need to install or reinstall the mouse driver software. Use the supplied Application Recovery CD to install the drivers. See Using the Application Recovery CD(s) for more information.

Why doesn't the pointer move when I use the USB mouse?

- Make sure another mouse was not installed.
- You may need to install or reinstall the mouse driver software. Use the supplied Application Recovery CD(s). See Using the Application Recovery CD(s) for more information.
- If you are playing a disc, press the **Ctrl**+**Alt**+**Delete** keys simultaneously to stop playback and restart the computer.
- If you still cannot use the pointer, restart the computer. You can restart the computer three different ways.
  - Press the **Windows** key , and press **U**. When the **Shut Down Windows** window appears, press **R** to select **Restart**, and press **Enter**.
  - Press the **Ctrl**+**Alt**+**Delete** keys simultaneously. When the **Windows Security** window appears, press the **Right Arrow** key to select **Shut Down**, and then press **Enter**. Use the **Down Arrow** key to select **Restart**, and press **Enter**.
  - Press and hold the power button. When the computer shuts down, press the power button again to restart the computer.

Why doesn't the touchpad work?

- You may have disabled the touchpad without connecting a mouse to the computer. See Customizing the touch pad for more information.
- Restart the computer to activate the touchpad again.
- If your touchpad is interpreting a single tap as a double-click, adjust the button assignments. Follow these steps:
  1. Press the **Windows** key . The **Start** menu appears.
  2. Press the **Up Arrow** key to select **Programs**, and press **Enter**.
  3. Press the **Up Arrow** key to select **Sony Notebook Setup**, and press **Enter**. A submenu appears with **Sony Notebook Setup** preselected.
  4. Press **Enter**. The **Sony Notebook Setup** dialog box appears.
  5. Press the **Right Arrow** key to select the **Touchpad** tab, and press **Alt**+**S** simultaneously. The **Mouse Properties** dialog box appears.
  6. Make sure the **Buttons** tab is selected, and press the **Up Arrow** key and **Down Arrow** key to change the button assignments. Press the **Tab** key to move between shortcut menus.
  7. Press **Enter** to save your changes and close the dialog box.
- If you are still experiencing problems, make sure another mouse was not installed.
- You may need to use your Application Recovery CD(s) to reinstall the mouse drivers. See Using the Application Recovery CD(s) for more information.

Why doesn't the pointer move when I use the touchpad?

- Try restarting your computer. Follow these steps:

1. Press the **Windows** key .
2. Press **U**. The **Shut Down Windows** dialog box opens.
3. Press **R** to restart the computer.

- If the computer does not restart,

1. Press **Ctrl**+**Alt**+**Delete** simultaneously. The **Windows Security** window appears.
2. Press **Alt** to highlight the menu bar, and press the **Right Arrow** key → to select **Shut Down**.
3. Press **Enter**.
4. Press **R** to restart the computer.

- If you still cannot restart your computer, press and hold the power button to turn off the computer.
- If the pointer does not move while playing a disc, press **Ctrl**+**Alt**+**Delete** simultaneously to stop playback and restart the computer.
- You may need to use your supplied Application Recovery CD(s) to reinstall the touchpad or mouse drivers. See Using the Application Recovery CD(s) for more information.

Troubleshooting the Modem

Why doesn't my modem work?

- Make sure the telephone cable is securely plugged into the computer and the wall jack. See To connect a telephone cable for more information.
- Make sure the telephone cable is working by plugging the cable into an ordinary telephone and listening for a dial tone.
- Make sure the telephone number the program is dialing is correct.
- Make sure the software you are using is compatible with the computer's modem. (All preinstalled Sony programs are compatible.)
- If you are still experiencing problems, use the supplied Application Recovery CD(s) to reinstall the modem driver software. See Using the Application Recovery CD(s) for more information.

Why is my modem connection slow?

Your computer is equipped with a V.90 compatible modem. Many factors may influence modem connection speed, including telephone line noise or compatibility with telephone equipment, such as fax machines or other modems. If you think your modem is not connecting properly to other PC-based modems, fax machines, or your Internet Service Provider (ISP), follow these steps:

- Ask your telephone company to verify your telephone line is free of any line noise.
- If your problem is fax-related, make sure there are no problems with the fax machine you are calling and that it is compatible with fax modems.
- If you are having a problem connecting with your ISP, make sure the ISP is not experiencing technical problems.
- If you have a second telephone cable available, try connecting the modem to that cable.

Troubleshooting Networks

Why can't my computer connect to a Wireless LAN Access Point?

- Connection availability is affected by distance and obstructions. You may need to move your computer away from obstructions or closer to any access point you may be using.
- Make sure the Wireless LAN switch on the computer is in the **ON** position or the Wireless LAN PC Card is properly inserted. See Inserting PC Cards for more information.
- Make sure power to the access point is on.
- Make sure the encryption key is correct.

Why can't I gain access to the Internet?

- If you are using a Wireless LAN PC Card, make sure it is properly inserted into the PC Card slot. For more information, see Inserting PC Cards.
- Check the access point settings. Refer to the instructions supplied with the access point.
- Make sure your computer and the access point are connected to one another.
- Move your computer away from obstructions or closer to any access point you may be using.
- Make sure your computer is properly configured for Internet access.

Why is the data transfer speed slow?

- The Wireless LAN data transfer speed is affected by distance and obstructions between devices and access points. Other factors include device configurations, radio conditions, and software compatibility. To maximize the data transfer speed, move your computer away from obstructions or closer to any access point you may be using.
- If you are using a Wireless LAN Access Point, the device may be temporarily overloaded depending on the number of other devices communicating via the access point.
- If your access point interferes with other access points, change the access point channel. See your access point instructions for more information.

Why is the communication speed interrupted or slowed down when MPEG2 data is transferred?

The typical effective data transfer speed via an access point is 4-5 Mbps when adhering to the IEEE 802.11b standard. High-rate stream transfers with MPEG2 data may lower this rate.

How do I avoid data transfer interruptions?

- Data transfer interruptions may occur with large files or use of microwaves and cordless telephones when connected to an access point.
- Move the computer closer to the access point.
- Make sure the access point connection is intact.
- Change the access point channel. See your access point instructions for more information.

Can I connect to a IEEE 802.11a device?

Computers with built-in Wireless LAN support the IEEE 802.11b standard only. Devices connecting to a Wireless LAN using the IEEE 802.11a standard cannot connect to devices using the IEEE 802.11b standard.

What are channels?

Wireless LAN communication occurs on divided frequency bands known as channels. Third-party Wireless LAN Access Point channels may be preset to different channels from Sony devices.

If you are using a Wireless LAN Access Point, refer to connectivity information contained in your access point instructions.

Why can't I establish a connection between two VAIO computers?

- Your computer may not recognize an i.LINK[1] connection if the i.LINK cable is not plugged securely into the i.LINK ports. Disconnect the i.LINK cable and securely reconnect it to both computers. If neither computer responds after a few moments, restart both computers.

- If the computers do not recognize the i.LINK connection after resuming from a power saving mode (Standby or Hibernate), restart both computers. For more information, see Connecting Another VAIO Computer.

[1] i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Troubleshooting DVDs and CDs

How do I maintain DVDs?

- Avoid touching the surface of the disc with your fingers. Fingerprints and dust on the surface of the disc may cause reading errors.
- To clean the disc, hold the edge of the disc, and use a soft cloth to wipe the surface from the center out. If the disc is badly soiled, moisten a soft cloth with water, wring it out well, and use it to wipe the surface of the disc from the center out. Wipe off any remaining moisture with a dry, soft cloth.
- Do not clean the disc with solvents (such as benzine, thinner, commercially available cleaners, or anti-static spray), which may damage the disc.
- Do not drop or bend the disc.

Why does my computer stop responding when I try to read a disc?

The disc your computer is trying to read may be dirty or damaged. Restart the computer, and eject the disc from the optical drive. Examine the disc for dirt or damage. If the disc is dirty, see How do I maintain CDs and DVDs? for instructions on how to clean it.

Why won't the optical drive tray open?

- Make sure the computer is on.
- Press the Eject button on the optical drive.
- If the Eject button does not work, open the tray by inserting a thin, straight object (such as a paper clip) in the hole to the right of the Eject button.

Why isn't the optical drive playing my CD or DVD properly.

- Make sure the disc label is facing up.
- If the disc requires software, make sure the software is installed according to the manufacturer's instructions.
- A dirty or damaged disc may cause the computer to stop responding while it tries to read the disc. If necessary, restart the computer, remove the disc, and check the disc for dirt or damage.
- If you see video but cannot hear audio, follow these steps:
  - Make sure your optical drive does not have the mute setting enabled.
  - Check the volume setting in the audio mixer.
  - If you are using external speakers, check the volume settings, and then check the connections between your external speakers and the computer.
  - Click **Start** on the Windows® taskbar, and click **Settings**, then **Control Panel**, and **System**. Select the **Hardware** tab, and click **Device Manager**. Make sure the correct driver software is properly installed.
- Do not use adhesive labels to identify the CD. The label may come off while the disc is in use in the optical drive and cause the drive to malfunction.
- If a region code warning appears when you try to use your optical drive, it may be that the DVD you are trying to play is incompatible with the optical drive. Verify the region code listed on the DVD package.
- Condensation may cause the computer to malfunction. If this occurs, do not use it for at least one hour.

Why did the computer (LCD) screen go blank?

- Your computer screen may go blank if the computer has lost power or is in a power saving mode (Standby or Hibernate).
  - Make sure the computer is plugged into a power source and is on. The power indicator on the computer will be on if the computer is on.

- Make sure the battery is inserted properly and is charged.
- If the computer is in LCD (Video) Standby mode, press any key to activate the computer screen.

- If the display mode is set to external display, press and hold the **Fn** key while you press **F7** several times.

Why don't my changes appear on the computer (LCD) screen?

You may need to refresh the computer screen. Press the Windows key and press **D** twice.

Troubleshooting i.LINK Drives

Why isn't my i.LINK drive playing a CD or DVD properly?

- The i.LINK optical drive will not play a CD or DVD if the disc was inserted with the label facing down. Eject the CD or DVD from the drive, and make sure the label is facing up.
- The disc requires a particular software that is not already installed on your computer. Install that software according to the manufacturer's instructions.
- The DVD is not compatible with the optical drive and a region code warning appears when you try to play it. Make sure the region code listed on the DVD package is compatible with the drive.

Why won't my i.LINK drive play my computer programs?

If multiple i.LINK®[1] devices are connected to the computer, the software supplied with your computer will not recognize them. Turn off your computer and all connected devices. Disconnect the devices that are not in use. See i.LINK optical (disc) drives for instructions on reconnecting the i.LINK device.

[1] i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Troubleshooting Floppy Disk Drives

Why doesn't the Safety Remove Hardware icon appear on the taskbar when the drive is connected?

The computer does not recognize that the floppy disk drive is connected to the computer. First, make sure the USB connector is properly inserted into the USB port. If you need to secure the connection, wait a few moments for the computer to recognize the drive. If the icon still does not appear, follow these steps:

1. Close all open programs to avoid data loss.
2. Eject the floppy disk from the floppy disk drive.
    1. Close all programs that were opened from the disk and wait for the LED indicator to turn off.
    2. Push the Eject button, and remove the disk.
3. Reconnect the floppy disk drive.
    1. Close any active programs to prevent data loss.
    2. Insert the USB connector (with the USB icon facing upward) into the USB port .
4. Restart the computer.
    1. Click **Start** on the Windows® taskbar, and click **Shut Down**.
    2. Select **Restart** and click **OK**.

Why is the drive unable to write data to a floppy disk?

The floppy disk drive cannot write data to a disk if it is inserted into the drive improperly. See Inserting and removing floppy disks for instructions on how to insert the disk properly.

If the disk is inserted properly and you are still unable to write data to it, the disk may be write-protected. You can either use a floppy disk that is not write-protected or disable the write-protect feature.

Troubleshooting PC Cards

Why doesn't my PC Card work?

- Make sure the PC Card is inserted properly. See Inserting PC Cards for more information.
- Make sure the PC Card is compatible with the Microsoft® Windows® operating system installed on your computer.
- Make sure any necessary driver software is installed.

Why doesn't my computer recognize attached devices?

For some PC Cards, if you alternate between normal power operation and the Standby or Hibernate modes while the card is inserted into the PC Card slot, the computer may not recognize the PC Card or the connected device. Restart your computer.

Why can't I insert my PC Card?

- Make sure you are inserting the card correctly. See Inserting PC Cards for more information.
- You may not be able to use some PC Cards or some functions of the PC Card with this computer. Check the manual that came with your PC Card for more information on its use.

Why does an exclamation mark (!) appear on the Device Manager tab in the System Properties dialog box?

You may not be using the most recent driver software provided by the PC Card manufacturer. Make sure the necessary drivers are installed. You may need to remove the driver software, and reinstall it.

Troubleshooting Audio-Video Connections

Why can't I use the DV recorder?

You may not be able to use the DV recorder and the message, **DV equipment seems to be disconnected or turned off** may appear because the i.LINK[1] cable is not securely plugged into the i.LINK ports on the computer or camera. Unplug the connectors, and plug them in again. See Connecting an i.LINK digital video recorder for more information.

Why won't my speakers work?

- Make sure the speakers are properly connected and the volume is turned up loud enough to hear sound.
- Your speakers may not be designed for computer use.
- If the speakers have a mute button, set the button to off.
- If you have connected an audio cable to the Headphone jack, disconnect the cable and use the speaker cable that was supplied with the speakers.
- You may need to install or reinstall speaker driver software. Use the Application Recovery CD(s) to reinstall the drivers. See Using the Application Recovery CD(s) for more information.
- If you are using battery power, make sure the battery(s) is inserted properly and is charged. See Using the Battery for more information.

Why can't I hear sound from my speakers?

- If you are using battery power, make sure the battery is properly inserted and is charged. See Using the Battery for more information.
- If you are using an program that has its own volume control, make sure the volume control is properly set. See that program's help file for more information.
- Your speakers may be set to mute, the volume setting may be too low, or the audio option may be disabled. See Adjusting the volume and Enabling the audio feature for more information.

Why don't the Fn+F3 or the Fn+F4 key combinations work?

The computer may not recognize the **Fn**+**F3** and **Fn**+**F4** key combinations if the correct speakers are not selected. Follow these steps:

1. Right-click the **Volume** icon on the taskbar, and select **Adjust Audio Properties**.
2. Select the **Audio** tab, and click **Advanced** in the **Sound Playback** box. The **Advanced Audio Properties** window appears.
3. Click the **Speakers** tab, if it is not already selected.
4. Select the correct stereo speakers from the **Speaker setup** shortcut menu.

Why do I hear noise distortion while listening to music with speakers or headphones?

You may experience noise distortion while listening to music with speakers or headphones if the CPU control is set to Automatic Profile Selection. Use the preinstalled PowerPanel software to set the CPU control to Performance or Battery Life. If you are using a memory-intensive application, set the CPU to Performance.[2] Follow these steps:

1. Right-click the **CPU** icon on the Windows® taskbar, and click **Edit/Create Profiles**. The **Profile Editor** window appears.
2. In the left panel, click the power management profile that you want to set. Maximum Battery Life is the default selection when your computer is running on battery power.
3. In the right panel, double-click either **CPU Control (Plugged in)** or **CPU Control (Running on batteries)**, depending on the power source you are using. A menu of CPU Control options appears.
4. Select an option. If you are using a memory-intensive program, set the CPU control to **Performance**.

5. Click the **File** menu, and click **Save**.

6. Close the **Profile Editor** window.

Why doesn't my microphone work?

If you are using an external microphone, make sure the microphone is properly plugged into the Microphone jack on the computer. See Connecting a microphone for more information.

[1] i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

[2] Applicable to models with a Crusoe processor.

Troubleshooting the LCD screen

Why did the computer (LCD) screen go blank?

- Your computer screen may go blank if the computer has lost power or is in a power saving mode (Standby or Hibernate).
  - Make sure the computer is plugged into a power source and is on. The power indicator on the computer will be on if the computer is on.
  - Make sure the battery is inserted properly and is charged.
  - If the computer is in LCD (Video) Standby mode, press any key to activate the computer screen.
- If the display mode is set to external display (such as TV), press and hold **Fn** while you press **F7** several times.

Why don't my changes appear on the computer (LCD) screen?

You may need to refresh the computer screen. Press the Windows key and press **D** twice.

Troubleshooting Memory Stick Media

Why can't I open my image files?

You may need to reformat your Memory Stick media.

Formatting Memory Stick media erases all data, including music data, previously saved to it. Before you reformat Memory Stick media, confirm that the media does not contain files you want to keep and back up important data.

1. Copy the data from the Memory Stick media onto your computer's hard disk to save data or images.
2. Format the Memory Stick media using Memory Stick Formatter software preinstalled on your computer. For instructions about formatting a Memory Stick media, see Formatting Memory Stick media.

Why can't I save music files onto my Memory Stick media?

- Only MagicGate Memory Stick media can be used with copyright protected data, such as music.
- Copyright protected music cannot be checked out to any Memory Stick media other than MG Memory Stick media.
- Recorded music is limited to private use only. Using recorded music for any other purpose requires permission of the copyright holders.
- Sony is not responsible for music files that cannot be recorded from a CD or downloaded from other sources.

Can I copy images from a digital video camera using Memory Stick media?

Yes, and you can view video clips that you have recorded with Memory Stick media-compatible video camera recorders.

How do I prevent damage to the Memory Stick media?

- Do not use the media in locations that are subject to static electricity or electrical noise.
- Do not touch the media connector with your finger or metallic objects.
- Do not attach labels other than the supplied label to a media.
- Do not bend, drop, or apply strong shock to the media.
- Do not disassemble or modify the media.
- Do not allow the media to get wet.

How do I extend the life of the Memory Stick media?

- Use the supplied storage case. See the instructions that came with your media for more information on its use.
- Do not use or store the media in a location that is subject to:
  - Extremely high temperatures, such as in a car parked in the sun
  - Direct sunlight
  - High humidity or places with corrosive substances

Troubleshooting Programs

What do I do when a program stops responding or crashes?

- Try restarting your computer.
  1. Click **Start** on the Windows® taskbar, and click **Shut Down**.
  2. Select **Restart** and click **OK**.
- If restarting your computer does not work, contact the software publisher or designated provider for technical support. See Program Support Information for contact information.

Why does the message, "You must insert the Application CD into your optical drive" appear, and the program does not start?

- Some titles require specific files that are located on the Application Recovery CD. Insert the disc, and try starting the program again.
- Your optical drive may not be reading the disc.
  - Make sure you place the CD in the tray with the label side facing up.
  - Make sure the optical drive is properly connected to your computer. See Connecting External Optical (Disc) Drives for more information.

Why can't the program find a file while a PC Card is inserted?

When a PC Card is inserted into a computer that is connected to the docking station, it may change the drive letters of the docking station disk drives or PC Card disk drives. If this occurs, the program you are using may not find certain files. Do one of the following:

- Remove the PC Card, and restart your computer. Do not insert the PC Card while using that program.
- Change the drive letters of the docking station disk drives or the PC Card disk drives. See the Windows® help file or the program guide for instructions on how to change the drive letters.

Which program do I use for CD-R/CD-RW functions?

Use the preinstalled Sony SonicStage software and Windows® software to create CDs on your VAIO® computer, if the specific model you purchased is preconfigured with all of the necessary components for CD-R and CD-RW capability.

You can also download the RealJukebox CD-burning component to create CDs, but it may interfere with your computer's normal system operations.

Why can't I use the DVgate program?

If your computer is using the Ultimate Battery Life profile as a power saving mode, you cannot use DVgate software. Please select another profile. Preferably, connect your computer to AC power when using these features.

Computer Support Information

If you have questions about your computer or the preinstalled programs, refer to the following sources for answers in the sequence listed below.

1 VAIO® Computer User Guide

The online VAIO® Computer User Guide and the printed VAIO® Computer Quick Start provide information on how to maximize your computer capabilities and solve common problems.

2 Software Manuals and Online Help Files

The software preinstalled on your computer may come with an online manual. These manuals are stored on the hard disk drive as online Help files. You can find the Help files from the Help menu under the specific software application. Some software programs may come with a printed manual.

3 Operating System Online Support

Your computer comes preinstalled with Microsoft® Windows®. For operating system support, you can access Microsoft® customer support at: http://support.microsoft.com/directory/.

4 VAIO Support Agent

You can find VAIO Support Agent by clicking Start and selecting Help and Support. Using advanced diagnostic technology, Sony's VAIO Support Agent runs scheduled protections of your programs, network settings, and other important software settings. When your software is protected, you can use VAIO Support Agent to repair software problems by restoring your software to any of the previously protected states.

5 Sony Computing Support

This service provides instant access to information on commonly encountered problems. Enter a description of your problem and the Knowledge Database searches for the corresponding solutions online. You can access Sony Computing Support at: http://www.sony.com/pcsupport.